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ENVIRITE CORPORATION THOMASTON, CONNECTICUT

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APPENDIX B
MINGES REPORT

ENGINEERING REPORT

on
PROPOSED
REGIONAL TREATMENT FACILITY

To Serve
THE METAL FINISHING INDUSTRY

January 31, 1975

Prepared for

Liqwacon Corporation

Prepared by

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Comm. No. 419-2

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SECTION A - INTRODUCTION

General

This engineering report describes a proposed Regional Treatment Facility for the processing of concentrated residues and sludges resulting from treatment of metal finishing wastes and related pollutants. Central waste treatment plants have been successfully demonstrated by various private companies to be a useful concept in the management of hazardous and difficult to handle industrial wastes. The concept is further supported by studies conducted by the Federal Environmental Protection Agency and various State authorities. A preliminary approval letter from DEP approving the concept is included in the Appendix.

The purposes and objectives of the proposed plant are to provide the metal finishing industry and related sources with a safe, controlled, reliable, and economic facility for the treatment and disposal of hazardous wastes, residues, sludges and similar materials which are difficult and costly to dispose of at individual plants and which can be effectively and economically handled at a specially designed central facility.

Type of Industry Served

The types of industry served by the proposed plant would be primarily metal plating, finishing, etching, and metal producing industries and that portion of the chemical industry which generates pollutants of similar nature. A large concentration of such sources is located in Connecticut and neighboring states.

Type of Proposed Plant

The plant would incorporate some of the latest advances in treatment technology along with methods and procedures that are widely recognized by treatment authorities. More specifically, the plant would consist of vessels for receiving and storing waste; reactors for neutralization, precipitation, detoxification, and chemical processing; sludge dewatering, effluent polishing, and solids landfilling; and special stations for the recovery of valuable resources. These operations will be supported with a modern laboratory and the staff for technical, transportation, and business functions. It is proposed to build the plant in central Connecticut.

The facilities and operations would be organized so that the various types of wastes can be treated in a manner appropriate to the waste characteristics. Generally the plant would be described as a batch treatment plant although some of the operations may be characterized as semi-batch in that selected batches would be continuously fed through specialized equipment. This design concept was selected to insure that all wastes will receive proper treatment and so that each batch can be monitored before release to the Naugatuck River or to the public sewer.

Ownership of Plant

The plant would be privately owned by Liqwacon Corporation. The management, the firm, and their consultants have had prior experience with plants of similar design and function. International Hydronics of Princeton, New Jersey and staff members of Drexel University, Philadelphia, Pennsylvania and the University of Syracuse, New York, have acted as consultants for various stages of the project.

Liqwacon Corporation is primarily owned by Yarway, Inc., of Bluebell, Pennsylvania. Yarway Corporation is a large U.S. and international supplier of valves, steam fittings, pumps, and industrial equipment. As the principal stockholder in Liqwacon, Yarway in effect guarantees the financial dealings and responsibilities of Liqwacon and has representation on the Liqwacon Board of Directors.

Staffing

It is estimated that approximately twenty employees will be needed for operations at plant capacity. For example:

1 - Plant Manager	1 - Operations Manager
1 - Sales	9 - Hourly Employees
1 - Secretary	1 - Maintenance
1 - Accounting	1 - Technical Manager
1 - Dispatcher	3 - Technicians

Total - 20

Delivery of Waste

Most wastes will be transported to the plant in 5,000 gal. bulk tankers. Others will be shipped on flatbed or box trailers that are typically used to transport drums and miscellaneous containers. All shipments are furnished with source, destination, commodity identification, bills of lading, and are placarded with Department of Transportation labels such as "Corrosives", "Acid", "Dangerous", etc.

Transport will be furnished by licensed carriers, by the waste generator, or by Liqwacon Corporation. Such equipment and operations will conform to State and/or Federal Department of Transportation regulations, placarding,

and equipment construction. Trailers may be lined with special coatings to resist corrosive attack and may be of stainless steel, carbon steel, and other constructions depending upon service and regulations.

In general, mixtures of various wastes will not be hauled in the same trailer in order to preserve segregation for storage and assurance of isolation to meet the intended chemical processing. When the wastes arrive at the plant they will be sampled to confirm they are consistent with previous samples, test results, and representations made at the time of sale of the services. This precaution protects against the possibility of mixing incompatible wastes in the storage tanks or processing facilities.

Effluent Disposal

Plant effluent will be discharged only after toxic materials are removed or destroyed and laboratory tests indicate the liquid complies with either river or sewer discharge criteria. Effluents which meet the criteria for Naugatuck River discharge, a Class "C" stream, will be discharged to the river via a pipeline and totalizing meter. River discharge criteria are shown in the draft of a discharge permit issued by DEP (See Appendix). It is the design intent to meet the river discharge criteria whenever possible.

Certain batches of effluent will not meet established criteria for discharge to the Naugatuck River due to the presence of organic contaminants exhibiting high COD (or TOC) or other constituents. In such cases, discharge will be made to the sanitary sewer of the Town of Thomaston. The chemical and physical characteristics which must be met for sewer discharge are covered elsewhere in this report as are the steps which will be taken to eliminate or

minimize the probability of any municipal sewer or sewage treatment plant damage or process upset.

The plant effluent will come from a single point in the plant, namely, the filtrate storage tank. This will be monitored and releases therefrom will be controlled at the highest levels of plant authority.

Solids Disposal

Chemical processing through the plant's reactors will result in the production of detoxified sludges and solids. These solids will be separated from the liquid phase with a precoat rotary vacuum filter and deposited in a special land reclamation area located on the plant site.

SECTION B - DESIGN CRITERIA

General

The design of the facility is primarily one of batch treatment except for the cementation and recovery of copper and the electrolytic oxidation of cyanide. These are semi-continuous inasmuch as batches of feedstock will be processed on a continuous basis.

Equipment sizing has been selected for economic treatment utilizing unit operations conventionally employed to accomplish the processes required for waste stabilization.

Nature and Characteristics of Raw Wastes

It is difficult to generalize on the nature of the raw wastes to be handled. It is the intent to initially provide for handling the more common types of wastes with future additions of facilities if the demand is sufficient to economically justify them.

The wastes to be accepted are generally the end residues and concentrates for which there is no further economic use by the generator, yet they present a definite disposal problem to the user and the environment. Typical wastes are spent process solutions; contaminated or spoiled baths; rinse waters; liquids generated by the cleaning of air, water, or equipment; unused or unreacted processing chemicals; and sludges which cannot be disposed of at recognized and controlled disposal sites because of miscellaneous contaminants. Frequently these waste materials have resulted in the pollution of underground and surface waters; thereby becoming a continuing threat and source of concern to pollution abatement agencies. The proposed plant will provide an urgently needed

facility to handle these wastes in an environmentally acceptable manner.

The proposed plant would be designed to receive and treat wastes of the following types:

Cyanides	Spent Plating Baths
Alkaline Waste	Spent Etchant Baths
Spent Etchants	Metal Pickling Waste
Metal Cleaning Waste	Contaminated Acids
Polishing Solutions	Sludges with Metals

In general the plant would receive the more concentrated forms of the above wastes. These will contain heavy metals, organics, complexing agents, wetting agents, acids, and traces of emulsified or dissolved oils. These properties and past experience indicate that the raw waste characteristics will normally fall into the following ranges:

specific gravity	-	0.9 - 1.6
color	-	light brown, generally an absence of strong dyes and pigments
odor	-	very slight, usually none, dependent upon organic contamination
organic content	-	varied, estimate maximum COD at 10,000 mg/l, BOD at 5,000 mg/l
biological treatability	-	can be treated effectively, may require pretreatment
acid concentrations	-	0-70% by weight, typically common inorganic acids
alkali concentrations	-	0-25% by weight
cyanide concentrations	-	trace to 10% by weight
free or soluble oils	-	less than 100 mg/l
metals	-	trace to 25% by weight

- phenols - typically less than 100 ppm
- sludges - pumpable, 0.1-10% by weight

Volume of Waste

Conservative market surveys indicate that the daily quantities of wastes generated in the area which can be economically served by the plant are as follows:

<u>Type</u>	<u>Gallons per Day</u>
Acids	30,000
Alkaline Wastes	5,000
Metal Bearing for Recovery	5,000
Cyanide	5,000
Miscellaneous and Drums	<u>5,000</u>
	50,000 Total

The wastes listed above contain the usual metals found in plating and finishing wastes, such as copper, iron, zinc, chromium, nickel, and minor quantities of lead, cadmium, tin, etc. Most of the solutions contain the metals as salts in acid, although some are alkaline. Other metal wastes will be presented as precipitated sludges, primarily hydroxides or hydrated metal oxides at varying concentrations.

Some of the alkaline cleaning wastes may contain small amounts of emulsified oil but waste oils or wastes containing high oil concentrations will not be accepted at the plant. Some wastes will require detoxification by a variety of chemical processing techniques.

Expected Effluent Characteristics

Effluent characteristics will meet the criteria for discharge to either the Naugatuck River or the Town of Thomaston sewage plant. No discharges

will be made by either mode without first monitoring the characteristics of the effluent batch in accordance with quality control procedures outlined later. The effluent quality criteria will meet the requirements of the State DEP for Naugatuck River discharges and the Town of Thomaston for sewer discharges. The effluent limitations are included in the Appendix and these limitations, on the latest revisions thereto, will be used as plant effluent quality criteria. The expected effluent quality for discharge to the Town of Thomaston sewers is as follows:

- Color - light brown liquid
- Appearance - water
- Odor - very slight (organics present)
- pH Range - 6 - 9
- Total Solids - 6% by wt.
- Dissolved Solids - 5.8% by wt. (dissolved inorganic salts)
- Suspended Solids - 0.2% by wt.
- Chemical Oxygen Demand - 10,000 mg/l (4167 lb/day)
- Biochemical Oxygen Demand - 5,000 mg/l (2083 lb/day)
- Sulfates (inc. in Diss. Solids) - 4% by weight
- Heavy Metals - 1 mg/l for each
- Cyanide, Oxidizable - 1 mg/l
- Chromium, hexavalent - 1 mg/l
- Floating or visible oil - none
- Phenols - 10 mg/l

Effect of Effluent on Town of Thomaston Plant

The effect of the effluent on the Thomaston treatment plant was studied by Cascio, Tuttle Engineering, Inc. A copy of their report is included in the Appendix. The report is favorable to the proposed effluent discharge but calls attention to certain special considerations relative to volume, BOD, COD, sulfates, sulfides and chlorine demand. All existing requirements of the present Town of Thomaston plus any special future requirements will be

complied with. As a minimum the following special provisions will be made to insure that the municipal sewers or treatment plant are not damaged or upset by the proposed effluent:

1. Maintain a complete laboratory for the evaluation of all wastes considered for treatment and assess biotoxicity via respiration techniques and simulated activated sludge testing. Only treatable wastes to be discharged to the sewer.
2. Maintain adequate records and laboratory testing programs to thoroughly characterize the effluent for suitability for sewer discharge.
3. Meter the quantity of waste discharged to the sewer and regulate to times and volumes that are reasonable and as specified by the sewage authority.
4. Accept inspections and sampling by the sewage authority.
5. Accept limits on strength and total lbs. of BOD to be discharged within a specified time period.

Operating Hours

Most processing and waste receipts will be conducted during the dayshift (8 AM - 4:30 PM) with a minimum number of operations employees on the 4 PM - 12 PM night shift. A third shift is not planned at this time.

The plant will normally be operated Monday through Friday of each week. Occasionally, it may be necessary to conduct Saturday and Sunday operations depending upon customer and transportation requirements.

Expected Volume and Characteristics of Solids Produced

The solids produced at the plant will be dewatered to at least 30 per cent solids on a pre-coat vacuum filter. At design capacity and under the most unfavorable input of acids approximately 25,000 gallons per day of unfiltered residues will be produced containing four per cent suspended solids or 9,225 pounds per day dry solids. Adding 10 per cent for pre-coat gives 10,148 pounds per day dry solids to be disposed of. The daily sludge cake production at design capacity will be about 15 cubic yards. Sludge cake production will be highly dependent upon the type of acid processed and at times could be considerably less than 15 cubic yards per day.

The character of the sludge will be that of a very loose crumbly loam or soil. It will be very easily handled and will have no free moisture. When dried further on exposure in the fill area no dust problem will occur.

SECTION C - PROCESS DESCRIPTIONS

General

Because of the variety of raw waste characteristics expected several different specific treatment processes will be employed to treat the wastes received. Each batch of waste received will be designated to receive one or more types of treatment depending on its raw characteristics. Flexibility in the plant will be provided to facilitate the use of various combinations of treatment processes for any given batch, particularly for the more common combinations. By use of strict quality control, however, any necessary modifications to usual procedures will be instituted as dictated by raw waste characteristics and treatment results.

Process Flow Diagrams

A process flow diagram is included in the Appendix. The diagram shows each treatment process and the commonly expected interconnections. The principal waste treatment flow diagrams include:

1. Acid-Alkali Process
2. Chromic Acid Process
3. Copper Cementation Process
4. Cyanide Process
5. Sludge Handling Process

Each process is shown on the schematic and is discussed in detail below:

1. Acid-Alkali Process

This process is basically neutralization of acids and alkalies to a pH value of about 8.5. Batch reactors will be used to process wastes

requiring neutralization, heavy metal precipitation, or other chemical processing depending upon the nature of the waste. A typical processing procedure for an acidic waste, containing heavy metals, would consist of adding alkaline waste and/or lime slurry to the reactor; pumping in acid below the surface of the alkaline mixture; adjusting the pH to 7.0 - 8.0; allowing 30 minutes for equalization and agitation; sampling and adding a stoichiometric quantity of alkaline sulfide; and finally readjusting the pH to 8.0 - 9.0 while removing residual sulfide. Final criteria for the liquid phase would be:

pH - 8.0-9.0

Heavy Metals - to meet all discharge criteria

Residual Sulfide - trace

After the laboratory confirms that each batch has been treated to specifications the resultant slurry would be pumped to a storage tank to await vacuum filtration as shown on the sludge disposal schematic.

2. Chromic Acid Process

Wastes containing hexavalent chromium will be treated for reduction to the trivalent form before final neutralization and precipitation. Reducing agents such as sulfur dioxide, sodium metabisulfite, and the effluent from the copper cementation process will be used depending on cost, availability, and production scheduling.

The hexavalent chromium reduction can be performed in the chromic acid storage tank. Normally the treatment will be carried out to reduce hexavalent chromium to less than 0.05 mg/l.

3. Copper Cementation Process

Acids and etchant wastes (ferric chloride, ammonium persulfate, or chromic acid) containing from 0.5 to 10% by wt. of copper will be treated in the copper cementation system. The copper will be cemented out of solution as the free metal by substitution of a lesser value metal such as iron or aluminum. This process has been successfully demonstrated and used by other reclaiming facilities.

A prime benefit of the process occurs when iron scrap is used as a reactant. Liberated ferrous ions reduce hexavalent chromium to the trivalent state, thereby eliminating a required treatment step for chromic acid processing.

The process involves a rotating reactor cylinder into which are introduced the copper bearing waste, scrap iron and an auxiliary acid as required. The reactor effluent is filtered and settled and the copper recovered. The effluent will be treated further by the acid-alkali or chromic acid processes described above.

4. Cyanide Process

Concentrated cyanides, 0.1 - 10% by weight, will be initially treated with a proprietary electrolytic destruction method. Any residual cyanide after electrolytic treatment (1,000 mg/l or less) will be destroyed by conventional two-stage oxidation methods using sodium hypochlorite or chlorine gas in a separate operation.

All reactions are carried out under alkaline conditions and the equipment ventilated to remove any off gases in a packed tower fume scrubbing system.

Endpoint criteria for cyanide destruction (by chlorination or complete electrolytic destruction) dictates a pH greater than 8.0 and free cyanide less than 0.05 to 1.0 mg/l, depending upon the intended discharge.

Cyanide free liquid will be discharged to a reactor for neutralization or filtered and recovered for caustic value depending upon impurities present.

5. Sludge Handling Process

The sludge handling process will consist of conventional sludge dewatering on a rotary pre-coat vacuum filter and cake disposal by sanitary landfill on site.

Resource Recovery

As mentioned previously, recovery of valuable metals will be practiced when ever it is economically feasible to do so. Initially, copper will be reclaimed from spent etching solutions (ferric chloride, ammonium persulfate, and chromic-sulfuric acids) by a cementation process using iron metal scrap as a raw material. Other metals may be recovered as values increase and the technology for economic recovery improves or develops.

The electrolytic process for cyanide destruction, followed by alkaline chlorination, will be a source of sodium and potassium hydroxides. The recovered caustic will be used to neutralize waste acids, but at times may have resale value depending upon the market and impurity levels.

Various acid and alkaline wastes will be combined and utilized as a means of offsetting waste against waste for treatment purposes. Another

example is the use of weak sulfide solutions to destroy the metal complexes often found in plating wastes.

Quality Control

A modern well-equipped laboratory and technical staff will be provided to monitor plant operations, evaluate customer samples, specify treatment procedures, perform analyses required by State and Federal Regulatory Agencies, and to test each incoming shipment for characteristic and critical properties. Instrumentation, such as atomic absorption spectrophotometry, visible spectrophotometry, total organic carbon analyzer, oxygen meter, etc., will be installed to rapidly and accurately undertake a wide variety of analyses.

The laboratory will daily monitor the plant effluent prior to discharge. Typical parameters of concern are: pH, total solids, dissolved solids, suspended solids, biochemical oxygen demand, chemical oxygen demand, total oxidizable carbon, cyanide, hexavalent chromium, and heavy metals such as copper, zinc, iron, nickel, lead, cadmium, chromium, and mercury.

SECTION D - PROPOSED FACILITIES

General

The facilities required to carry out the processes described in Section C require a site which is located near a surface stream of suitable size and classification to receive treated effluent and near a municipal sewer on a system of adequate size and type of treatment. In addition a suitable area for landfill disposal of the solids produced is required. These requirements are ideally fulfilled by the Thomaston site. A site plan, location map, floor plan, topographic plan and equipment specifications are included in the Appendix.

Location

The proposed site is located approximately two miles south of the center of the Thomaston business district adjacent to the north side of the Town of Thomaston wastewater disposal facility. The site has a total area of approximately 14 acres. It is located west of the access road to the Town treatment plant and east of Branch Brook, a tributary of the Naugatuck River.

Site Conditions

The site investigations centered upon the nature of the existing material at the sludge disposal site, the drainage characteristics of the material, the relationship of the site to surface and ground water, and the adaptability of the site for utilization as a disposal area without encroachment or danger of pollution or contamination of adjacent areas.

The site is fairly level and is well drained. No problems are anticipated with either ground water or surface water. The site is not subject to flooding.

Approximately 40 per cent of the site is presently covered with gravel stockpiles which will be removed for use on projects elsewhere.

Subsurface conditions were determined by taking five borings and excavating three seepage pits. In addition some miscellaneous excavations were made to confirm soil conditions. The borings and other tests indicate that the site had been previously used to dispose of large rocks, boulders, stones, and gravel. This fill covers about 85-90 per cent of the site and ranges in depth from about five feet near the front or east side to 15 feet or more in other parts of the site. It was learned that the original site topography was undulating and consequently, it is possible that even greater depths of rock fill may exist in some areas. The rock fill contains rock boulders or blasted pieces having a mean diameter as large as three to five feet. Below the fill material is a layer of sand and gravel in which the seepage tests were made. These tests showed good seepage rates, ranging from one inch in 4 minutes to one inch in 10 minutes.

Bedrock is exposed just off the property to the north. The depth to bedrock varies from 30 feet at a boring along the north property line to about 23 feet along the south property line.

One of the seepage test pits near the northeast corner of the site revealed the presence of a deposit of oily sludge which was later learned to be waste material from a solvent recovery operation. Additional excavations in the vicinity of these deposits indicate that they are 30 to 48 inches thick and cover an area of about 40' x 125' in size. This area should be segregated from any

new sludge deposits.

Four of the boring test holes around the perimeter of the site were fitted with test or observation wells for future use. Additional wells can be added in the future if necessary.

Details of the seepage test pits, boring logs and observation wells are included in the Appendix. Also included are data relative to surface and ground water elevations.

Water level elevations were obtained at two points in the Naugatuck River, two points in Branch Brook and in the four observation wells as shown in the Appendix. The difference in the water levels between the Naugatuck River and Branch Brook is very small indicating that the ground water table is practically flat in the east-west direction. There is a slight pitch in the ground water table downward to the south in the direction of flow of the river and the brook.

Based on these observations, it appears that if any leachate is produced, it will probably move in a southeasterly direction toward the Naugatuck River from any deposits located on the east side of the site. Consequently, the initial fill operations should be confined to the east side of the site and water quality in the observation wells should be carefully monitored to determine the direction of ground water movement. Leachate quality will not adversely affect ground water or surface water if operations are carried out as described herein. The most vulnerable to degradation would be Branch Brook or the ground water to the south. If such degradation should appear at a later date, the flow

of ground water could be altered by any one of the following:

- (1) Inject water into the ground between Branch Brook and the sludge deposits to force ground water movement toward the Naugatuck River.
- (2) Artificially raise the water level in Branch Brook on-site to force ground water movement toward the Naugatuck River.

Considering the topographic and subsurface conditions at the contemplated sludge disposal site, and the nature of the sludges proposed to be disposed of in this area, the site is suitable as either a final or interim disposal area for mechanically dewatered sludges. This type of application can normally be carried out without nuisance, and needs only very occasional sand or gravel cover and since the disposal area is reasonably well drained, an underdrain system need not be provided. With adequate treatment of the sludges prior to dewatering and disposal, the leachate from the dewatered sludge in the disposal area would not be expected to contain any significant pollutants, and need not be prevented from seeping ultimately into the ground water table and the Naugatuck River.

The site will readily support conventional earth-moving machinery and trucking, and no special equipment would be required to utilize the area for dewatered sludge disposal.

This site lends itself well to utilization as either an ultimate disposal area, or as an interim disposal area that at a later date, should reclamation technology and economics so dictate, could be re-excavated to allow transfer of the sludge to a reclamation facility.

Site Layout

The plant will be housed in a building located on the east central part of the site. All storage and treatment operations will be carried out in the building. The landfill operations will be carried out in the northeast section of the site.

Building Design

The proposed treatment and operations building will house all functions including management, sales and laboratory. The building will be divided into three areas as follows:

1. Offices and Laboratory
2. Operations and Storage
3. Truck Unloading

1. Offices and Laboratory

The offices and laboratory area will be one story construction with drywall interior partitions. Floors and hallways of the offices will be covered with vinyl tile.

2. Operations and Storage

The operations area and storage area will be of insulated steel construction with concrete floors to support tankage. The area will be equipped with sumps to which any floor drainage will flow. The alkaline and acid waste handling areas will be separated to prevent accidental

mixing. The inside working height will be 20' - 25' feet with inside supporting columns. A 15' wide by 20' high electrically operated door to the storage area and personnel doors on each side of the area will be provided. Adequate provisions for ventilation will be made. Heating will be provided so that a minimum of 40° F can be maintained throughout. Two 1' wide by 3' high openings will be provided on the side next to the truck unloading area for hoses to pass through the wall to the sumps.

3. Truck Unloading

A concrete area will be provided to support 80,000 lb. tractor-trailer rigs. The area will be equipped with separated drains to separately collect alkaline or acid contamination should spillage occur.

The plant will consist of approximately 5,000 sq. ft. of processing area (reactors, cyanide treatment, copper recovery, filtration, etc.); 7,000 sq. ft. devoted to waste storage, drum decanting, and chemical storage; and 2,500 sq. ft. of office and laboratory space. The proposed floor plan is shown in the Appendix.

The operations areas consist of the following stations:

- Receiving and Storage (bulk, container, and drums)
- Vacuum Decanting (containers and drums)
- Acids, Base, and Sludge Treatment
- Lime Storage (bulk)
- Sludge Thickening
- Sludge Filtration (rotary vacuum filter)
- Cyanide Destruction (electrolytic)
- Copper Recovery (cementation)
- Chromic Acid Treatment (reduction)

Each of the above stations is described in more detail below. Incorporated in each of the descriptions is a brief functional and equipment description to

indicate how the treatment processes previously described in Section C will be carried out.

Receiving and Storage Facilities

The receiving and storage facilities consist of the following:

1. Truck Unloading Area
2. Drum Storage Area
3. Vacuum Drum Unloading Facilities
4. Acid Waste Storage Tanks
5. Alkaline-Cyanide Waste Storage Tanks

Eight 10,000 gallon tanks will be used for receiving and storing acidic wastes. Material of construction was selected to resist a broad range of corrosives and permit wide latitude in type of service allowed for the tanks.

Three 10,000 gallon tanks will be used for alkaline wastes and cyanide storage. These tanks will be physically separated from acid tanks with separate pumps and drains. One tank will be used for alkaline waste, one for concentrated cyanides, and the last for dilute cyanides.

Drums and containers will be stored in the receiving area on pallets until vacuum decanted for transfer to the appropriate storage tanks. One decant system will be maintained for alkaline waste and another for acid types. Each decant system will consist of a 1,000 gallon FRP tank and rotary vane vacuum pump. Vacuum applied to the tank by the pump will suck drum contents (via a two inch hose and wand) into the tank for subsequent transfer to storage. The output of the vacuum pump will be connected to a fume scrubber.

Deliveries received in bulk tank trucks will be pumped out of the truck by hose connections to unloading pumps. Three pumps will be provided for unloading bulk acid deliveries and two for bulk alkaline and cyanide deliveries.

The acid pumps and alkaline pumps are completely separated from each other.

The discharges from the two bulk alkaline-cyanide pumps and the alkaline-cyanide drum decant pump are piped to the three alkaline-cyanide storage tanks. Similarly the acid unloading pumps discharge to eight acid storage tanks.

The eight acid storage tanks will be provided with hose connections to any of the three acid pumps for the purpose of transferring the contents to the acid-alkali treatment system. Similarly the three alkaline-cyanide tanks can be pumped out by two separate pumps to either the acid-alkali treatment system or to the cyanide treatment system.

The truck unloading area will be paved and sloped in the same manner as the operations and storage areas to prevent spillage from escaping and contaminating ground water or surface water. Rain water from the paved area will be contained so that if contamination occurs the waters can be collected and pumped to a treatment area. Storm waters are expected to meet discharge criteria because of housekeeping practices.

Tank trucks will be washed out whenever necessary with all wash waters pumped directly to storage or treatment areas.

Unloading facilities will be provided to minimize drips of wastes from hoses during unloading operations and to collect and dispose of any unavoidable spillage. As previously mentioned, when the wastes arrive at the plant they will be sampled to confirm they are consistent with previous samples, test results, and representations made at the time of sale of the services. This precaution protects against the possibility of mixing incompatible wastes in the storage tanks or processing facilities.

Acid-Alkali Treatment Facilities

The acid-alkali system consists of the following facilities:

1. Batch Reactors
2. pH Monitoring System

Three 10,000-gallon batch reactors will be provided. Each tank will be fitted to receive discharges from the acid storage pumps, the alkaline storage pumps and the lime feed system. Also each reactor will be connected to the pH monitoring system. Each tank will have a mixer and will be connected to the acid fume scrubber.

The pH monitoring system will consist of a sample pump, flow-through pH cell and pH indicator-recorder.

The operating procedure will be as described in Section C.

Chromic Acid Treatment Facilities

The chromic acid treatment would be carried out in one of the acid storage tanks, using one of the acid pumps for recirculation and mixing. The pump would also be used to energize an eductor for feeding sulfur dioxide. After completion of the reaction, the contents of the tank would be transferred to one of the acid-alkali reactors. The pH during the reaction will be monitored by sampling and laboratory pH tests. Provisions will be made to also feed bisulfite solutions for chromium reduction.

Copper Cementation Recovery Facilities

The copper cementation facilities consist of the following:

1. Feed Pump
2. Flow Meter
3. Reactor
4. Iron Scrap Feed Conveyor
5. Two Settling Tanks
6. Copper Effluent Pump
7. Auxiliary Acid Feed

The feed pump would deliver waste from the storage area through a flow meter to the cementation reactor. The pump and flow meter permit regulation of flow rate within desired limits. The reactor will be a two-foot diameter and nine-foot long polypropylene reactor cylinder with six internal baffles. Scrap iron and raw waste will be fed in the inlet end of the reactor along with an auxiliary acid feed as required to maintain pH value within desired limits. The copper cementation reactor will discharge into two settling tanks in series. The copper effluent pump will pump the settling tank effluent to the copper effluent tank in the storage area.

The copper effluent tank will then be used for hexavalent chromium reduction or neutralized as required.

Cyanide Treatment Facilities

The cyanide treatment facilities consist of the following:

1. Two Pumps
2. Electrolytic Oxidation Unit
3. Chlorine Feeder
4. Hypochlorite Tank
5. Alkaline Chlorination Treatment Tank

Dilute cyanides will be treated by alkaline chlorination unless the cyanide concentration dictates use of electrolytic oxidation. Concentrated cyanide wastes will be treated by electrolytic oxidation. The electrolytic oxidation unit will receive 500 gallon batches from the storage tanks. After four hours the cyanide will be reduced to about 1000 mg/l and the batch will be transferred to the alkaline chlorination tank using the two cyanide pumps provided. The electrolytic oxidation unit will be connected to the alkali fume scrubber.

The alkaline chlorination system will be operated to achieve complete cyanide destruction using two stages of treatment. The first stage at pH 10 to 10.5 will convert free cyanide to cyanate and the second stage at pH 8.0 to 8.5 will convert cyanate to nitrogen, carbon dioxide and water. The cyanide pumps will be used to recycle the treatment tank contents to mix the tank and energize the chlorine feeder. The tank will also be mixed with air. The pH value and cyanide concentration will be monitored by sampling and laboratory analysis. The effluent produced will be utilized in the general neutralization reactions because of free available alkalinity. The chlorination tank will be connected to the alkaline fume scrubber.

Sludge Dewatering Facilities

The treated batches from the acid-alkali reactors will be high in precipitated solids and will average about 1.1 specific gravity and four per cent suspended solids. These solids will be pumped from the batch reactors to a sludge handling facility consisting of:

1. Sludge Storage Tank
2. Sludge Pumps
3. Pre-Coat Vacuum Filter
4. Filtrate Storage Tank

The sludge will be pumped from storage and filtered through a precoat vacuum filter, 10 ft. in diameter x 12 ft. long. At estimated filtration rates of 5 gallons/hour/sq. ft., two 10 x 12 filters will be required at plant capacity. However, until the plant approaches its 50,000 gallon/day capacity, only one filter will be installed. Subsequent installations will be based on throughput, the use of flocculating agents, and operating experience.

The filtrate from the vacuum filter will be stored for laboratory testing and approval of quality before release to the river or sewer.

Washed solids generated by filtering operations will be removed by forklift truck in 1-1/2 cubic yard containers and transported to the landfill area for disposal.

Sludge Disposal

The filter cake produced on the pre-coat filter will be disposed of on-site by accepted landfill procedures.

The dewatered solids or sludge cake derived from filtration operations will be firm and free of visible liquid. The cake will be approximately 30 - 35 per cent by weight solids. The expected volume at design capacity is 5 - 15 cubic yards per day.

Placement of the solids in the landfill and minimal protection from rainfall will allow the material to dry out and compact producing a stable and non-dusting deposit. Various techniques such as cementation, mixing or covering with sand and gravel, the use of bentonite clays, or other cementation and solidification devices can be used to speed the process if desired.

Solids will be landfilled in segregated compartments, each approximately 100 ft. long x 100 ft. wide x 10 ft. deep. After each pit is filled to capacity, a new area will be employed until such time as a new layer can be placed over a filled area after separation by approximately one foot of cover material.

The landfill site was a sand and gravel pit that was partially backfilled with rock rubble. When necessary retaining walls of sand, earth, or gravel will be used to block off any exposed pit faces or to maintain contour lines.

The deposited solids will be protected from rainfall and drainage in order to promote sludge drying and compaction. Exposed sludge surfaces will be sloped and then protected with plastic overlays, a cementation process the use of bentonite clays, or other non-polluting sealants. Should any sizeable quantity of fluid collect in the landfill area, it will be pumped back to the plant for filtration and discharge to an approved outlet.

Ground waters will be monitored for contamination with a minimum of four wells placed on the perimeter of the landfill area, as dictated by the apparent movement of ground waters. These wells have been installed as shown in the Appendix.

Air Pollution Considerations

The treatment facility potentially could contribute to air pollution because of lime transfers, liquid storage and processing, copper cementation, and cyanide destruction. The appropriate corrective action is indicated below with each source:

1. Lime Silo

A bag filter is employed as an integral part of the lime storage facility. The purpose of the filter is to remove all particulate lime generated when transferring hydrated lime into the silo from a blower on the bulk delivery truck.

2. Reactors

Occasionally various acids produce fumes when diluted or neutralized, e.g., strong nitric acid. Any gases or fumes generated in this manner will be collected and removed in a packed column fume scrubber. Manufacturer's data for the scrubber shows approximately 99% efficiency for the system.

3. Storage Tanks

Vapors will be displaced from storage tanks during filling. These vapors will be sent to the gas scrubber indicated in item 2 above.

4. Copper Cementation Process

Acid fumes collected from the cementation reactor and settling tank will be removed in the acid fume scrubber (Item 2).

5. Cyanide Process

The electrolytic destruction of cyanide with the formation of carbon dioxide and nitrogen gases, will generate small quantities of entrained liquids in air above the tank. These vapors will be collected and removed in a separate scrubber system, similar to that indicated in Item 2 above.

Housekeeping and Spillage Control

Every effort will be made to control spillage in and around the plant area to minimize safety, pollution, and housekeeping problems. To this end the operations and storage areas of the plant are designed with sloping floors intercepted with specially lined trenches and sumps. Any spillage collected in the sumps will be pumped to the appropriate treatment process.

All transfer and acid pumps will be recessed over the sumps in order to contain seal leakage, leaks from hose connections, and leaks emanating from associated fittings and piping. Smaller pumps will be placed in PVC or polyethylene receptacles.

Curbing or floor sloping and separate sumps will be provided to segregate cyanide or alkaline spillage from acid areas.

The truck unloading area will be paved and sloped to prevent spillage from contaminating ground water. It also will be segregated into acid and alkaline areas. Rain water from the paved area will be contained so that if contamination occurs the waters can be collected and pumped to a treatment area. Storm waters are expected to meet discharge criteria because of house-keeping practices and will be pumped to the Naugatuck River after testing.

Tank trucks will be washed out whenever necessary with all wash waters pumped directly to storage or treatment areas.

Safety

All construction of plant and facilities will conform to existing State, Federal, or OSHA regulations.

Safety showers will be provided in the operations, storage, laboratory and truck unloading areas. Various safety devices; e.g., fire extinguishers, first aid equipment, respiratory protective devices, cyanide test equipment, etc. will be located throughout the plant.

All employees in the operations area will be provided with hard hats, safety glasses, protective face shields, rubber suiting, gloves and hard toe

rubber shoes or boots. Hard hats, safety glasses and hard toe boots will be mandatory, other equipment used as dictated by the job requirements.

In the event of total power failure all operations can be shut down and the wastes contained in their storage vessels. This implies the possibility of restricting incoming shipments, based on storage capacity, and limiting production based on the capabilities of gasoline powered pumps and portable generators.

Emergency exit lighting will be provided throughout the plant, office, and laboratory areas.

Miscellaneous Supporting Equipment

An acid fume scrubber will be provided. This scrubber is designed to remove any fumes or vapors originating at the storage tanks (during filling), vacuum decant system, reactors, and copper cementation system.

Materials of construction for the building and equipment were carefully selected to withstand a wide range of corrosive conditions and chemical service. Fiberglass reinforced plastics (FRP) are used extensively throughout the plant.

Utilities

Utilities required at the plant include:

Water	Gas
Sewer	Telephone
Drainage	Heating Fuel
Electrical Power	

Chemicals

Chemicals to be used at the plant will be principally:

1. Hydrated Lime
2. Chlorine (gas and sodium hypochlorite)
3. Sulfur Dioxide and Sodium Bisulfite
4. Sodium or Ferrous Sulfide

Hydrated lime will be purchased in bulk and stored in an enclosed outdoor silo. The chemical will be fed to any of the three acid-alkali reactors by means of a tubular conveyor.

Chlorine gas will be purchased in one ton cylinders and provisions will be made to use sodium hypochlorite as an alternate.

Sulfur dioxide will be purchased in one ton cylinders and provisions will be made to use sodium bisulfite as an alternate.

Sodium and/or ferrous sulfide will be purchased in bags.

APPENDIX

Location Map

DEP Preliminary Approval Letter

DEP Draft Permit

Cascio, Tuttle Engineering Inc. Letter of Evaluation of Proposed Effluent

Seepage Test Pits

Surface Water and Ground Water Elevations

Boring Logs

References

Equipment Specifications

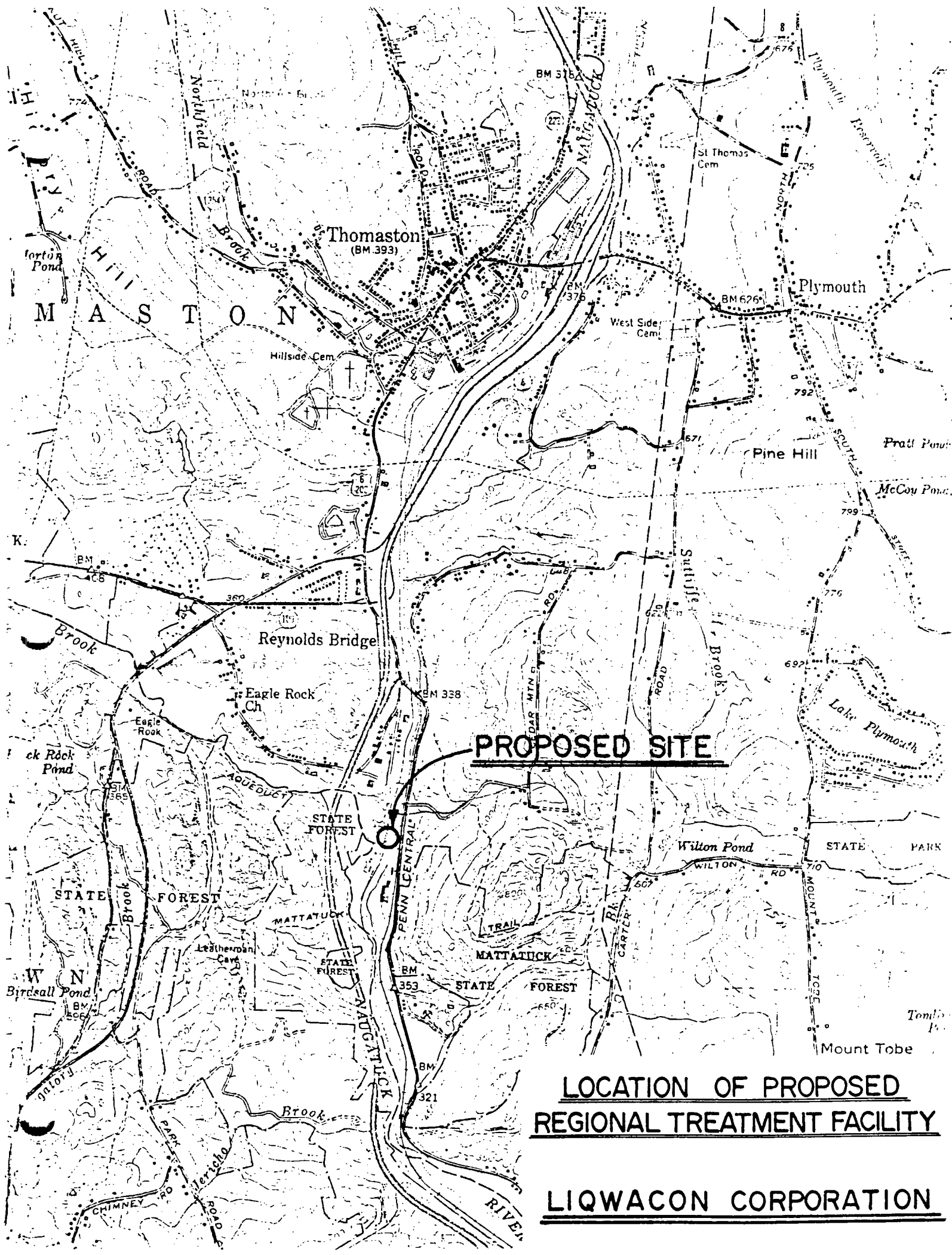
DRAWINGS

Process Schematic

Topographic Plan

Site Plan

Floor Plan



PROPOSED SITE

LOCATION OF PROPOSED
REGIONAL TREATMENT FACILITY

LIQWACON CORPORATION



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OFFICE BUILDING

HARTFORD, CONNECTICUT 06115



September 4, 1974

Liqwacon Corporation
c/o Yarway Corporation
Blue Bell, Pennsylvania 19422

ATTENTION: Mr. Richard M. Welch
President

Gentlemen:

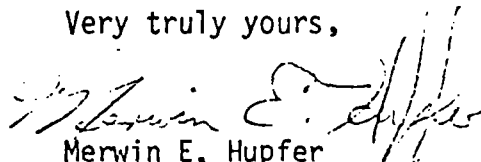
Subsequent to the public hearing held on August 12, 1974 on your application for a permit to discharge an average of 40,000 gallons per day of treated metal finishing wastewater to the Naugatuck River, the Hearing Examiner found that the tentative determination was appropriate and recommended authorization of the discharge.

The Director of Water Compliance and Hazardous Substances has concurred with the recommendation and has authorized the staff to complete its review of the plans and specifications for the proposed treatment facility. He further authorized the issuance of the required federal and state permits upon installation of the facilities in full compliance with approved plans and specifications.

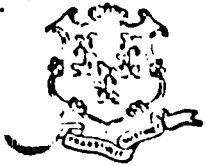
We are completing our review of the plans and specifications for your facility. Upon approval of the plans and specifications, you will be authorized to proceed with construction of the required facilities.

If you have any further questions, please feel free to contact this office.

Very truly yours,


Merwin E. Hupfer
DIRECTOR
WATER COMPLIANCE

MEH:AMK:lch



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER QUALITY - WATER COMPLIANCE, HAZARDOUS SUBSTANCES
STATE OFFICE BUILDING - HARTFORD, CONNECTICUT 06115



NPDES Permit

Liquacon Corporation
c/o Yarway Corporation
Blue Bell, Pennsylvania 19422

Attention: Mr. Richard M. Welch
President

DRAFT
REVIEW ONLY

Re: DEP/WPC 006-F18
Town of Beacon Falls
Naugatuck River Watershed

Gentlemen:

This permit is authorized to be issued by Chapter 474a, Connecticut General Statutes and Section 402(b), Federal Water Pollution Control Act Amendments of 1972, 86 Stat. 916 et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an N.P.D.E.S. permit program.

Your application, filed with the Connecticut Department of Environmental Protection on June 11, 1974 has been reviewed by the Connecticut Department of Environmental Protection.

The Director, Water Compliance and Hazardous Substances Division, Department of Environmental Protection (hereinafter "the Director") hereby finds that the discharge will not cause pollution of the waters of the state.

The Director, acting under Section 25-54i, hereby permits Liquacon Corporation to take such action as is necessary to:

1) Insure that all wastewaters described in the above referenced application are collected, treated and discharged in accordance with the plans and specifications approved by the Director on together with associated engineering documents, correspondence and other data submitted to comply with this permit.

) Insure that all discharges described in this permit shall not exceed and shall otherwise conform to the specific terms and general conditions specified herein.

A) Discharge Serial No. 001
Receiving Stream - Naugatuck River
Average Daily Flow - 40,000 gallons per day

<u>Parameter</u>	<u>Average Daily Quantity</u>	<u>Maximum Daily Quantity</u>	<u>Average Daily Concentration</u>
Aluminum	0.304 kg/day	0.608 kg/day	2.0 mg/l
Cadmium	0.015 kg/day	0.030 kg/day	0.1 mg/l
Chromium-Total	0.076 kg/day	0.152 kg/day	0.5 mg/l
Chromium-Hexavalent	0.0076 kg/day	0.015 kg/day	0.05 mg/l
Copper	0.152 kg/day	0.304 kg/day	1.0 mg/l
Iron	0.456 kg/day	0.912 kg/day	3.0 mg/l
Lead	0.015 kg/day	0.030 kg/day	0.1 mg/l
Nickel	0.304 kg/day	0.608 kg/day	2.0 mg/l
Tin	0.015 kg/day	0.030 kg/day	0.1 mg/l
Zinc	0.304 kg/day	0.608 kg/day	2.0 mg/l
Cyanide (Amen.)	0.0076 kg/day	0.015 kg/day	0.05 mg/l
Cyanide (Total)	0.456 kg/day	0.912 kg/day	3.0 mg/l
Ammonia, NH ₃	0.304 kg/day	0.608 kg/day	2.0 mg/l
Fluoride	1.52 kg/day	3.04 kg/day	10.0 mg/l
Phenol	0.0076 kg/day	0.015 kg/day	0.05 mg/l
Chemical Oxygen Demand	4.56 kg/day	9.12 kg/day	30.0 mg/l
Total Organic Carbon	2.28 kg/day	4.56 kg/day	15.0 mg/l
Surfactants	0.76 kg/day	1.52 kg/day	5.0 mg/l
Hexane Extractables	1.52 kg/day	3.04 kg/day	10.0 mg/l

- 1) The pH of the discharge shall not be less than 6.0 or greater than 9.0.
- 2) The discharge shall not contain a visible oil sheen, foam or floating solids.
- 3) The discharge shall not contain more than 0.1 milliliters per liter settleable solids.
- 4) The discharge shall not cause visible discoloration of the receiving waters.
- 5) The average daily concentrations specified above shall not be exceeded by more than a factor of 2.0 during any day.
- 6) The temperature of the discharge shall not increase the temperature of the receiving stream above 85°F or raise the normal temperature of the receiving stream more than 40°F.

3) Not discharge any new pollutant no authorized by this permit which has or may have an adverse impact on the receiving waters.

4) Monitor and record the following for the purpose of reporting quality and quantity of each discharge according to the following schedule:

A) Discharge Serial No. 001

<u>Parameter</u>	<u>Minimum Frequency of Sampling</u>	<u>Sample Type</u>
Aluminum	Twice Per Week	Composite
Cadmium	Twice Per Week	Composite
Chromium-Total	Twice Per Week	Composite
Chromium-Hexavalent	Twice Per Week	Composite
Copper	Twice Per Week	Composite
Iron	Twice Per Week	Composite
Lead	Twice Per Week	Composite
Nickel	Twice Per Week	Composite
Tin	Twice Per Week	Composite
Zinc	Twice Per Week	Composite
Cyanide (Amen.)	Twice Per Week	Composite
Cyanide (Total)	Twice Per Week	Composite
Ammonia, NH ₃	Twice Per Week	Composite
Fluoride	Twice Per Week	Composite
Phenol	Twice Per Week	Composite
Chemical Oxygen Demand	Twice Per Week	Composite
Total Organic Carbon	Twice Per Week	Composite
Surfactants	Twice Per Week	Composite
Hexan Extractables	Twice Per Week	Composite
pH	Twice Per Week	Range During Composite

1) Record the total flow during the period of composite sample collection.

5) Not bypass the treatment facilities at any time.

6) Dispose of screenings, sludges and other solids or oils and other liquid chemicals at locations approved in accordance with the provisions of Chapter 474a and/or Chapter 361a of the Connecticut General Statutes or to waste haulers licensed under Chapter 474a of the Connecticut General Statutes.

7) Provide an alternate power source adequate to operate the treatment facility and/or such other means as may be appropriate to insure that no discharge of untreated or partially treated wastewater will occur during a failure of the primary power source.

8) On or before _____ verify to the Director that compliance with paragraphs 1, 2, 3, 4, 5, 6, 7 and 8 will be achieved.

9) On or before thirty (30) days following initiation of the discharge and on a monthly basis thereafter, submit to the Director all monitoring data as required by paragraph 4 above.

This permit shall be considered as the permit required by Section 402 of the Federal Water Pollution Control Act and Section 25-54i and shall expire on _____

The permit shall be subject to all the NPDES General Conditions dated February 4, 1974 which are hereby incorporated into this permit.

Entered as a permit of the Director the th day of

Robert B. Taylor, DIRECTOR
WATER COMPLIANCE AND HAZARDOUS SUBSTANCES
Department of Environmental Protection
State of Connecticut

NPDES No. CT0021571

NPDES GENERAL CONDITIONS

These general conditions apply to all orders or permits issued by the Department of Environmental Protection which are considered NPDES Permits under the provisions of Section 402 of the Federal Water Pollution Control Act.

1. Any person or municipality wishing to initiate, create or originate any new discharge of water, substance or material into the waters of the State of Connecticut shall file an application for a permit which shall include a complete NPDES application no later than 150 days in advance of the date on which it is desired to commence the discharge.
2. Any application filed in accordance with condition (1) shall be signed as follows:
 - (a) In the case of corporations, by a principal executive officer of at least the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates.
 - (b) In the case of a partnership, by a general partner.
 - (c) In the case of sole proprietorship, by the proprietor.
 - (d) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official or other duly authorized employee.
3. The recipient of any order or permit shall immediately notify the Director, Water Compliance and Hazardous Substances, Department of Environmental Protection (hereinafter "the Director") and the Regional Administrator of the Environmental Protection Agency when it is known that any interim or final requirement of the order or permit will not be complied with and the reasons therefor. The Director may require the filing of a written statement itemizing the reasons for non-compliance.
4. All discharges authorized by any order or permit shall be consistent with the terms and conditions of the order or permit.
5. Facility expansion, production increases or process modification which may result in new or increased discharges of water, substance or material to the waters of the State of Connecticut must be authorized by the issuance of a new or revised permit or order prior to being initiated, created or originated unless such discharges do not violate the terms and conditions of an existing order or permit.
 - (a) If a new or increased or decreased discharge of water substance or material to the waters of the State of Connecticut does not violate the terms and conditions of the existing order or permit, notice of such new or increased or decreased discharge shall be sent to the Director and the Regional Administrator of the Environmental Protection Agency.

- (b) If the new or increased discharge of water, substance or material will violate the terms and conditions of an existing order or permit, an application shall be filed in accordance with condition (1).
6. The discharge of water, substance or material more frequently than, or at a level in excess of the terms and conditions of any existing order or permit shall constitute a violation of the terms and conditions of the order or permit.
 7. Any order or permit may be modified, revoked, or suspended in accordance with applicable federal and state statutes, regulations and other administrative procedures in whole or part during its term for cause including, but not limited to, the following:
 - (a) Violation of any term or condition of the order or permit;
 - (b) Obtaining an order or permit by misrepresentation or failure to disclose fully all relevant facts; and
 - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge.
 8. The Director or the Regional Administrator of the Environmental Protection Agency or their authorized representatives, on presentation of credentials shall be permitted:
 - (a) To enter upon the premises in which the effluent source is located or in which any records are required to be kept under the terms and conditions of the order or permit;
 - (b) To have access to and copy any records required to be kept under the terms and conditions of the order or permit;
 - (c) To inspect any monitoring equipment or method required in the order or permit; or
 - (d) To sample any discharge of water, substance or material to the waters of the State of Connecticut.
 9. The recipient of any order or permit shall at all times maintain in good working order, and operate as efficiently as possible, any facility or systems of control installed to achieve compliance with the terms and conditions in the order or permit.
 10. If a toxic effluent standard or prohibition including any schedule of compliance specified in such effluent standard or prohibition is established under Section 307(a) of the Federal Water Pollution Control Act for a toxic pollutant which is present in any discharge of water, substance or material to the waters of the State of Connecticut and such standard or prohibition is more stringent than any term or condition of an order or permit the Director shall revise or modify that order or permit in accordance with the toxic effluent standard or prohibition and so notify the permittee.

11. Any recipient of an order or permit who wishes to continue to discharge water, substance or material to the waters of the State of Connecticut after the expiration date of the order or permit shall file for a reissuance of the order or permit on a form prescribed by the Director which shall include a complete NPDES application no less than 180 days in advance of the date of expiration.

12. The recipient of any order or permit shall:

- (a) Maintain records of all information resulting from any monitoring program contained in the terms and conditions of the order or permit.
 - (b) Identify in the monitoring records 1) the date, the exact place and the time of sampling; 2) the dates analyses were performed; 3) who performed the analyses; 4) the analysis techniques and methods used; 5) the results of such analysis;
 - (c) Retain for a minimum of three years, or longer if specifically required by the Director, any records of monitoring activities and results including all original strip chart readings from continuous monitoring instrumentation and calibration and maintenance records;
 - (d) Report on forms prescribed by the Director the monitoring results obtained in accordance with specified terms and conditions of any order or permit.
13. For the purpose of complying with the monitoring requirements prescribed in the terms and conditions of any order or permit, the sampling, preservation, handling and analytical methods used must conform to the following references methods, latest edition. However, different but equivalent methods are allowed if they receive prior written approval of the Director.

- (a) Standard Methods for the Examination of Water and Wastewaters, 12th Edition, 1971, American Public Health Association, New York, New York 10019.
- (b) A.S.T.M. Standards, Part 23, Water: Atmospheric Analysis, 1970; American Society of Testing and Materials, Philadelphia, Pennsylvania 19103, or
- (c) Methods for Chemical Analysis of Water and Wastewaters, April 1971, Environmental Protection Agency, Water Quality Office, Analytical Water Quality Control Laboratory, 1014 Broadway, Cincinnati, Ohio 45268.

14. Definitions

Average - The arithmetic average

Composite Sample - A mixture of aliquot samples obtained at regular intervals over a time period. Normally the volume of each individual aliquot is proportional to the discharge flow rate or the sampling interval (for constant volume samples) is proportional to the flow rate over the time period used to obtain the composite. A composite sample shall contain at least four aliquot samples collected over a four hour period.

Grab Sample - An individual sample collected in less than 15 minutes.

Range During Composite - The maximum and minimum values of a parameter observed in the aliquot samples used to make a composite sample.

Cooling Water - Water used for cooling purpose only, which contains heat, but which has no direct contact with any product or raw material.

Average Daily Concentration - The average concentration during a 24-hour period or an operating day.

Average Daily Flow - The average flow rate during an operating day.

Average Daily Quantity - The average quantity of waste generated during an operating day.

Maximum Daily Quantity - The maximum quantity of waste generated during a 24-hour period.

Metal Concentration - All metal concentrations are expressed as total metal concentration.

Daily Average - The average of a minimum of 8 measurements obtained at regular intervals over an operating day.

Four-Hour Average - The average of a minimum 4 measurements obtained at regular intervals during composite sample collection.

Cyanide - Cyanide which is amenable to destruction by chlorine.

APPROVED Robert B. Taylor DATE February 4, 1974

Robert B. Taylor
DIRECTOR, WATER COMPLIANCE AND HAZARDOUS SUBSTANCES
Department of Environmental Protection



CASCIO, TUTTLE ENGINEERING INC.

CONSULTANTS
86 WASHINGTON AVENUE
NORTH HAVEN, CONN. 06473
(203) 239-4251

December 31, 1974

M. HAMDY BECHIR, ScD.
GERALD A. CASCIO
HIRAM A. TUTTLE

Mr. Richard Welch
87 Longview Drive
Churchville, Pennsylvania 18966

Re: Liqwacon Industrial Waste Evaluation
for acceptance into the Thomaston
Municipal Plant.

CTE 74-124

Dear Mr. Welch:

In accordance with your instructions we have evaluated the possible effects of Liqwacon industrial waste on the Thomaston Municipal Plant.

Following is a summary of our findings:

1. The proposed discharge characteristics fall within the limits established in the Thomaston Ordinance except for the volume, suspended solids and BOD.
2. The increase in hydraulic loading due to the Liqwacon waste and based on the present average daily flow is 6.25% which, for all practical purposes, will not materially alter the detention times in the treatment units of the Thomaston Plant.
3. The Liqwacon waste has a suspended solids level of 2,000 mg/l. This waste mixed with the Thomaston municipal waste, having a suspended solids level of 100 mg/l will result in a waste having a suspended solids level of 212 mg/l. In our opinion, this will greatly improve the settling efficiencies of the primary settling tanks since the influent to the tanks will be concentrated rather than dispersed media.
4. The average BOD of the industrial municipal waste mixture will be 300 mg/l, however, since the industrial BOD is predominantly soluble, no BOD removal improvement is anticipated in the primary settling tanks.
5. The increase in organic loading, as measured by the pounds of BOD of the industrial municipal waste mixture, applied to the aeration tanks is 2.5 folds. This means that more aeration tanks will have to be put in operation for effective BOD removal or probably another mode of operation such as step aeration rather than conventional activated sludge should be employed.

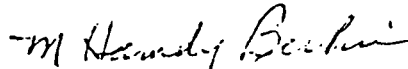
6. The effect of increased organic loading will result in an increase in power consumption for additional mechanical aerators, return and waste sludge pumping as well as an increase in chlorine demand.
7. We can see two additional areas that require further investigation.
 - A. The amount of COD that does not exert BOD (about 5,000 mg/l). Does it have chlorine demand for oxidation? This is needed to assure proper chlorine feed rate before discharge into the Naugatuck River. This parameter could only be established when samples of the waste are available for testing. It is suggested that a composite sample of the waste be tested for this parameter within the first year of operation and adjustments be made when the test results are known.
 - b. The amount of soluble sulfates in the industrial waste is rather high. It is our estimate that the sulfate concentration in the industrial municipal waste mixture is in the vicinity of 2,400 mg/l. Considering that the primary sludge pumped to the digester is 4 to 5% concentration, then 95 to 96% of the water pumped to the digesters carries a high sulfate concentration. In the anaerobic environment of the digesters, the sulfates will be reduced to hydrogen sulfide resulting in noxious odors and blackening of copper piping. The extent of the sulfate sulfide reduction is beyond the scope of this limited study. However we recommend that it be evaluated further so as to avoid possible future problem with the digestion system.

It is therefore our considered opinion that the proposed Liqwacon industrial waste, having characteristics as shown in your December 5, 1974, memo, is biologically treatable in the Thomaston Municipal Plant. The industrial municipal waste mixture will enhance the settling efficiency of the primary settling tanks since the influent is more concentrated. Additional power for aeration, return and waste sludge pumping and chlorination is needed. Further study to determine the exact chlorine demand and the behavior of sulfates in the digesters will be necessary to fully ascertain the effects on the municipal plant and avoid future conflict.

We have enjoyed performing this evaluation for you and we stand ready to tackle the chlorine demand and sulfate behavior in the digester if you so desire.

Very truly yours,

CASCIO, TUTTLE ENGINEERING, INC.



Dr. M. Hamdy Bechir, P.E.
President

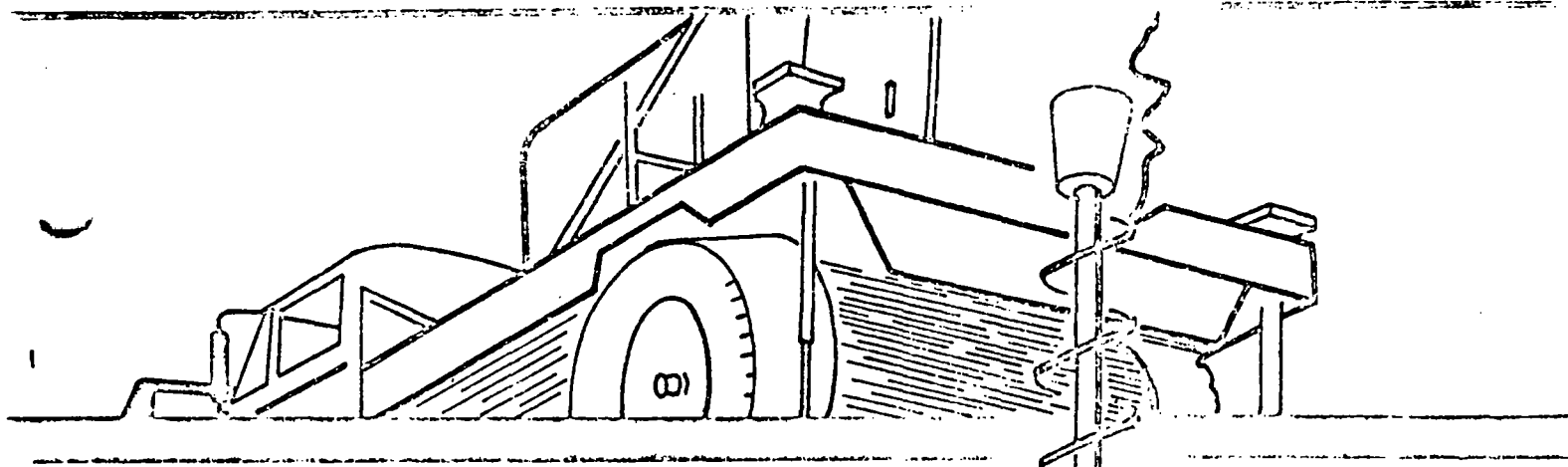
SEEPAGE TEST PITS

(See Plan for Locations)

	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>
Total Depth	14'	7'	7-1/2'
Overburden of Rock Fill	0	4-1/2'	6'
Ground water	None	None	None
Material at bottom of hole	Coarse sandy gravel with trace of silt in all holes		
Seepage Rate (Minutes/inch)	4	10	6

SURFACE WATER AND GROUND WATER ELEVATIONS

<u>Location</u>	<u>Date (1975)</u>	
	<u>Jan. 27</u>	<u>Feb. 6-7</u>
Naugatuck River North	325.7	324.8
Naugatuck River South	324.5	324.2
Branch Brook North	324.6	324.6
Branch Brook South	322.6	322.0
Well #13	324.4	324.4
Well #15	326.5	325.4
Well #16	322.5	322.7
Well #17	325.8	325.4



Connecticut Test Borings, Inc.

SUB-SURFACE SPECIALISTS P.O. BOX 69, SEYMOUR, CONN.

SERVING: Connecticut, Massachusetts, Rhode Island, Vermont,
Maine, New Hampshire, New York, New Jersey, Pennsylvania

INTERGRITY

EXPERIENCE

Client **JAMES S. MINGES & ASSOCIATES, INC.**
THE EXCHANGE
FARMINGTON AVENUE
FARMINGTON, CONNECTICUT

Project

Location **THOMASTON, CONNECTICUT**

Architect

Engineer **JAMES S. MINGES & ASSOCIATES, INC.**

Driller **R.K.**

Driller Assistant **A.D.**

Jar samples and/or rock core samples delivered
upon request.

Hollow Stem Auger Borings

Dry Sample Borings

Piston Samples

Rock Coring

Shelby Tubes

Piezometers

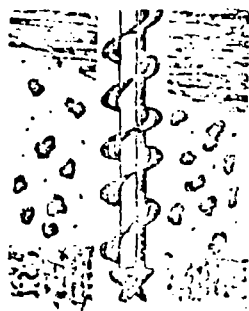
Well Points

Mineral Exploration

Seismic Surveys

Shallow Caissons

Engineering Reports



Seymour 883-3857 • ~~MAINE 883-3857~~

SUB-SURFACE SPECIALISTS • P. O. BOX 69, SEYMOUR, CONN.
SERVING: Connecticut, Massachusetts, Rhode Island, Vermont,
Maine, New Hampshire, New York, New Jersey, Pennsylvania

Connecticut Test Borings, Inc.

PENETRATION RESISTANCE & SOIL PROPERTIES

Predominant sand and gravel			Predominant silt and clay	
COHESIONLESS	SOILS	COHESIVE	SOILS	COMPRESSIVE
Blows per foot	Relative Density	Blows per foot	Consistency	Strength (qu*)
0 to 4	very loose	0 to 2	very soft	below .25
4 to 10	loose	2 to 4	soft	.25 to .50
10 to 30	medium	4 to 8	medium	.50 to 1.0
30 to 50	dense	8 to 15	stiff	1 to 2
over 50	very dense	15 to 30	very stiff	2 to 4
		over 30	hard	over 4

NOTES:

Above based on 2" O. D. sampler x 1-3/8" i.d. 140 Wt. x 30" Fall (qu*) =
Tons per square Foot

STATE OF CONNECTICUT BASIC BUILDING CODE

TABLE 15. PRESUMPTIVE SURFACE BEARING VALUES OF FOUNDATION MATERIALS

	CLASS OF MATERIAL	Tons per Square Foot
-	Massive crystalline bed rock including granite, diorite, gneiss, trap rock, hard limestone and dolomite.	100
-	Foliated rock including bedded limestone, schist and slate in sound condition.	40
4	Sedimentary rock including hardshales, sandstones, and thoroughly cemented conglomerates.	25
4	Soft or broken bed rock (excluding shale) and soft limestone.	10
4	Compacted, partially cemented, sand and gravel and hardpan overlying rock.	10
6	Gravel and sand gravel mixture.	6
7	Loose gravel, hard dry clay, compact coarse sand, and soft shales.	4
3	Loose, coarse sand and sand gravel mixtures and compact fine sand (confined).	3
9	Loose medium sand (confined), stiff clay.	2
0	Soft broken shale, soft clay.	1.5

E START 1-27-75

SHEET 1 of 1

CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists

P. O. Box 69

SEYMOUR, CONNECTICUT

(203) 888-3857

ESPECIALLY COMPILED FOR

James S. Minges & Associates Inc.

The Exchange

Farmington Avenue

Farmington, Connecticut

PROJ. NO.

LOCATION Thomaston, Connecticut

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. 1

CASING	SAMPLER	CORE BARREL
--------	---------	-------------

TYPE

FWC

SS

SIZE I.D.

 $2\frac{1}{2}''$

1 3/8"

START	1-27-75
FINISH	1-27-75
G HAMMER	140 XXX
A FALL	30' XXX'

GROUND WATER OBSERVATIONS

DATE	TIME	DEPTH
1-27-75	0 Hrs.	Dry

SAMPLER OD 2" I.D. 1 3/8"

E OF RIG Hydraulic Rotary[illegible]

Proportions used: trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%.

TOTAL FOOTAGE.

Earth Boring 7.25' Ft

Rock Coring	Fe.
1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
23	100
24	100
25	100
26	100
27	100
28	100
29	100
30	100
31	100
32	100
33	100
34	100
35	100
36	100
37	100
38	100
39	100
40	100
41	100
42	100
43	100
44	100
45	100
46	100
47	100
48	100
49	100
50	100
51	100
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80	100
81	100
82	100
83	100
84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

HOLE NO 1

DRILLER: R. K.
HELPER: A. D.
SOILS ENGINEER _____

SAMPLE TYPE
C = CORED W = WASHED
SS = SPLIT SPOON
UP = UNDISTURBED PISTON
TP = TEST PIT
UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY
0-10 LOOSE
10-30 MED. COMP.
30-50 DENSE
50+ VERY DENSE

SE START 1-27-75
TE FINISH 1-27-75
HEIGHT OF HAMMER 140 XXX
SAMPLER 30" XX
GROUND WATER OBSERVATIONS
DATE 1-27-75 TIME 0 Hrs. DEPTH Dry
SAMPLER O.D. 2" I.D. 1 3/8"
TYPE OF RIG Hydraulic Rotary

SOIL SAMPLING LOG
CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists
P. O. Box 69
SEYMOUR, CONNECTICUT
(203) 888-3857

ESPECIALLY COMPILED FOR
James S. Minges & Associates Inc.
The Exchange
Farmington Avenue
Farmington, Connecticut

SHEET 1 of 1

PROJ. NO.

LOCATION Thomaston, Connecticut

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. 1-A

CASING SAMPLER CORE BARREL

TYPE FWC

SIZE I.D. 2 1/2"

Depth Bt. Below Surf. Face	SAMPLE NO. DEPTHS ELEV. FT.	Type of Sample	BLOWS PER 6" ON SAMPLER			DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE		
			From 0-6	6-12	To 12-18				NO.	PFN	REC
								Brown coarse to fine sand and coarse to fine gravel, cobbles and boulders.			
							7.5'				
10											
20								Bottom of Boring 7.5'.			
30											
40											

Proportions used: trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: R.K.
HELPER: A.D.
SOILS ENGINEER
SAMPLING INSPECTOR

SAMPLE TYPE
C = CORED W = WASHED
SS = SPLIT SPOON
UP = UNDISTURBED PISTON
TP = TEST PIT
UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY
0-10 LOOSE
10-30 MED. COMP.
30-50 DENSE
50+ VERY DENSE

TOTAL FOOTAGE:

Earth Boring 7.5' Ft.
Rock Coring Ft.
HOLE NO. 1-A

SHEET 1 of 1

CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists

P. O. Box 69

SEYMOUR, CONNECTICUT

(203) 888-3857

ESPECIALLY COMPILED FOR

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The Exchange

Farmington Avenue

Farmington, Connecticut

PROJ. NO.

LOCATION Thomaston, Connecticut

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. 3

CASING	SAMPLER	CORE BARREL
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
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29	29	29
30	30	30
31	31	31
32	32	32
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36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
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46	46	46
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54	54	54
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74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

TYPE HSA SS

SIZE I.D. $2\frac{1}{2}"$ $1\frac{3}{8}"$

E START 1-27-75
E FINISH 1-27-75
G HAMMER 140 XXX
FALL 30' XX

GROUND WATER OBSERVATIONS

DATE	TIME	DEPTH
1-27-75	0 Hrs.	Dry

AMPLER OD 2" I.D. 1 3/8"

E OF RIG . . . Hydraulic Rotary

[illegible]

Proportions used trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%.

DRILLER: R.K.

HELPER: A.B.

SOILS ENGINEER _____

SAMPLE TYPE

C = CORED W = WASHED

SS = SPLIT SPOON

UP = UNDISTURBED PISTON

TP = TEST PIT

UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED. COMP.

30-50 DENSE

50-+ VERY DENSE

TOTAL FOOTAGE.

Earth Boring 2.5' Ft.

Rock Coring Ft.

HOLE NO 3

START 1-29-75
DATE FINISH 1-29-75
WEIGHT OF HAMMER 140 360CX
ANVIL 30" XX
GROUND WATER OBSERVATIONS
DATE 1-29-75 TIME 0 Hr. DEPTH 14.0'
EL
SAMPLER O.D. 2" I.D. 1 3/8"
TYPE OF RIG Hydraulic Rotary

SOIL SAMPLING LOG
CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists
P. O. Box 69
SEYMOUR, CONNECTICUT
(203) 888-3857

ESPECIALLY COMPILED FOR
James S. Minges & Associates Inc.,
The Exchange
Farmington Avenue
Farmington, Connecticut

SHEET 1 of 1

PROJ. NO.
LOCATION Thomaston, Connecticut
LINE & STA.
OFFSET
GROUND ELEVATION
HOLE NO. 9
CASING HSA SAMPLER SS CORE BARREL
TYPE HSA SS
SIZE I.D. 2 1/2" 1 3/8"

Depth Below Surface	SAMPLE NO DEPTHS ELEV. FT.	Type of Sample	BLOWS PER 6" ON SAMPLER			DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE		
			From 0-6	6-12	To 12-18				NO.	PFN	REC
0											
10											
12.0'								Bottom of Test Pit.			
15.0' to 15.25'		SS	75	3"		V. Dense Wet		Brown c-f sand and c-f gravel, trace of silt, cobbles.	1	.25'	2
19.0'								Refusal.			
Bottom of Boring 19.0'.											

Proportions used trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: R. K.
HELPER: A. D.
SOILS ENGINEER
BORING INSPECTOR

SAMPLE TYPE
C = CORED W = WASHED
SS = SPLIT SPOON
UP = UNDISTURBED PISTON
TP = TEST PIT
UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY
0-10 LOOSE
10-30 MED. COMP.
30-50 DENSE
50+ VERY DENSE

TOTAL FOOTAGE:
Earth Boring 19.0' Ft.
Rock Coring Ft.
HOLE NO. 9

DATE START 1-27-75
DATE FINISH 1-27-75
WEIGHT OF HAMMER 140 XXX
SAMPLER OD 2" ID 1 3/8"
TYPE OF RIG Hydraulic Rotary
GROUND WATER OBSERVATIONS
DATE 1-27-75 TIME 0 Hrs. DEPTH 11.08'

SOIL SAMPLING LOG
CONNECTICUT TEST BORINGS, INC.
Sub-Surface Specialists
P. O. Box 69
SEYMOUR, CONNECTICUT
(203) 888-3857
ESPECIALLY COMPILED FOR
James S. Minges & Associates Inc.
The Exchange
Farmington Avenue
Farmington, Connecticut

SHEET 1 of 1
PROJ. NO.
LOCATION Thomaston, Connecticut
LINE & STA.
OFFSET 40.0' East
GROUND ELEVATION
HOLE NO. 13
CASING HSA SAMPLER SS CORE BARREL
TYPE HSA SS
SIZE I.D. 2 1/2" 1 3/8"

Depth Below Surface	SAMPLE NO. DEPTHS ELEV. FT.	Type of Sample	BLOWS PER 6" ON SAMPLER			DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE		
			From 0-6	6-12	To 12-18				NO	PFN	REC
								Brown c-f sand and c-f gravel.			
	5.0' to 6.5'	SS	2	2	3	Loose Dry	4.5'	Brown fine sand, some silt.	1	1.5'	1.5'
	10.0' to 11.0'	SS	28	60		V. Dense Moist	8.5'	Brown c-f sand and c-f gravel.	2	1.0'	.83'
	15.0' to 15.08'	SS	60	1"		V. Dense		Cobbles.	3	.08'	0
	20.0' to 20.5'	SS	60	6"		V. Dense Wet		Brown c-f sand, some silt and c-f gravel.	4	.50'	.50'
							23.5'	Refusal.			
								Bottom of Boring 23.5'.			
								Installed 1 1/4" W.O. well point at 22.0' below grade 1.5' above grade.			

Proportions used: trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: R.K.
HELPER: A.D.
SOILS ENGINEER
DRILLING INSPECTOR

SAMPLE TYPE
C = CORED W = WASHED
SS = SPLIT SPOON
UP = UNDISTURBED PISTON
TP = TEST PIT
UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY
0-10 LOOSE
10-30 MED COMP.
30-50 DENSE
50+ VERY DENSE

TOTAL FOOTAGE:
Earth Boring 23.5' Ft.
Rock Coring Ft.
HOLE NO 13

SITE START 1-27-75
 DATE FINISH 1-27-75
 TYPE OF HAMMER 140 XXXX
 ANVIL 30" XX
 GROUND WATER OBSERVATIONS
 DATE 1-27-75 TIME 0 Hrs. DEPTH 17.08'
 SAMPLER O.D. 2" I.D. 1 3/8"
 TYPE OF RIG Hydraulic Rotary

SOIL SAMPLING LOG
CONNECTICUT TEST BORINGS, INC.
 Sub-Surface Specialists
 P. O. Box 69
 SEYMOUR, CONNECTICUT
 (203) 888-3857

SHEET 1 of 1

PROJ. NO.
 LOCATION Thomaston, Connecticut
 LINE & STA.
 OFFSET
 GROUND ELEVATION
 HOLE NO. 15
 CASING HSA SAMPLER SS CORE BARREL
 TYPE HSA SS
 SIZE I.D. 2 1/2" 1 3/8"

ESPECIALLY COMPILED FOR

James S. Minges & Associates Inc.,
 The Exchange
 Farmington Avenue
 Farmington, Connecticut

Depth Below Surface	SAMPLE NO. DEPTHS ELEV. FT.	Type of Sample	BLOWS PER 6" ON SAMPLER			DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE		
			From 0-6	To 6-12	To 12-18				NO.	PFN	REC
								Brown c-f sand and c-f gravel, cobbles.			
	5.0' to SS 5.5'		60/6"			V. Dense Dry		Brown c-f sand and c-f gravel, cobbles.	1	.50'	33'
10	10.0' to SS 11.5'		29	37	50	V. Dense Dry		Same as sample #1.	2	1.5'	1.0
							13.0'				
	15.0' to SS 16.5'		12	12	13	Med. Comp. Moist		Brown f-c sand, trace of f-m gravel, trace of silt.	3	1.5'	1.0'
							18.0'				
20	20.0' to SS 21.5'		22	26	31	V. Dense Wet		Brown c-f sand, some silt, some c-f gravel.	4	1.5'	1.0
							23.5'				
	25.0' to SS 25.9'		60/6"			V. Dense Wet		Brown c-f sand and c-f gravel, some cobbles.	5	.50'	.50
							28.5'				
30	30.0' to SS 30.08'		60/1"			V. Dense		Augered into rock or cobbles from 28.5' to 30.08' Refusal.	6	.08'	0
								Bottom of Boring 30.08'.			
								Installed 1 1/4" W.O. Well Point at 27.0' below grade 1.5' above grade.			
40											

Proportions used: trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: R.K.
 HELPER: A.D.
 SOILS ENGINEER
 DRILLING INSPECTOR

SAMPLE TYPE
 C = CORED W = WASHED
 SS = SPLIT SPOON
 UP = UNDISTURBED PISTON
 TP = TEST PIT
 UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY
 0-10 LOOSE
 10-30 MED. COMP.
 30-50 DENSE
 50+ VERY DENSE

TOTAL FOOTAGE:
 Earth Boring 30.08' Ft.
 Rock Coring Ft.
 HOLE NO 15

SOIL SAMPLING LOG

SHEET 1 of 1

CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists

P. O. Box 69

SEYMOUR, CONNECTICUT

(203) 888-3857

ESPECIALLY COMPILED FOR

James S. Minges & Associates Inc.

The Exchange

Farmington Avenue

Farmington, Connecticut

PROJ. NO.

LOCATION Thomaston, Connecticut

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. 16

CASING

SAMPLER

CORE BARREL

TYPE

HSA

SS

SIZE I.D.

2 1/2"

1 3/8"

START 1-29-75
 FINISH 1-29-75
 HAMMER 140 XXX
 FALL 30" XX
 GROUND WATER OBSERVATIONS
 DATE 1-29-75 TIME 0 Hrs. DEPTH 12.5'

SAMPLER I.D. 2" I.D. 1 3/8"
 OF RIG Hydraulic Rotary

Depth Below Surface	SAMPLE NO. DEPTHS ELEV. FT	Type of Sample	BLOWS PER 6" ON SAMPLER			DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE		
			From 0-6	To 6-12	To 12-18				NO.	PFN	REC
10											
	15.0' to 16.5'	SS	6	6	8	Med. Comp. Wet	14.0' Bottom of Test Pit	Brown c-f sand, little silt.	1	1.5'	1.2
20	20.0' to 21.5'	SS	7	6	7	Med. Comp. Wet		Brown c-f sand, little silt.	2	1.5'	1.1
							23.0'	Installed 1 1/2" W.O. well point at 23.0' below grade 1.5' above grade.			
30								Bottom of Boring 23.0'.			
40											

Proportions used trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: R.K.
 HELPER: A.D.
 SOILS ENGINEER

SAMPLE TYPE
 C = CORED W = WASHED
 SS = SPLIT SPOON
 UP = UNDISTURBED PISTON
 TP = TEST PIT
 TW = UNDISTURBED THINWALL

COHESIONLESS DENSITY
 0-10 LOOSE
 10-30 MED. COMP.
 30-50 DENSE
 50+ VERY DENSE

TOTAL FOOTAGE:

Earth Boring 23.0' Ft.

Rock Coring Ft.

HOLE NO. 16

SOIL SAMPLING LOG

CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists

P. O. Box 69

SEYMOUR, CONNECTICUT

(203) 888-3857

ESPECIALLY COMPILED FOR

James S. Minges & Associates

The Exchange

Farmington Avenue

Farmington, Connecticut

SHEET 1 of 1

PROJ. NO.

LOCATION Thomaston, Connecticut

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. 17

CASING SAMPLER CORE BARREL

TYPE HSA SS

SIZE I.D. 2 1/2" 1 3/8"

DATE START 1-29-75

DATE FINISH 1-29-75

G.W. OF HAMMER 140 XXX

WALL 30" XXX

GROUND WATER OBSERVATIONS

DATE 1-29-75 TIME 0 Hrs. DEPTH 13.5'

SAMPLER O.D. 2" I.D. 1 3/8"

TYPE OF RIG Hydraulic Rotary

Depth Below Surface	SAMPLE NO DEPTHS ELEV. FT.	Type of Sample	BLOWS PER 6" ON SAMPLER			DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH ELEV.	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE		
			From 0.6	To 6.12	To 12.18				NO.	PFN	REC
								Brown c-f sand, some c-f gravel.			
							4.0'				
	5.0'to SS 6.5'		5	5	6	Med.Comp. Dry		Brown c-f sand, little c-f gravel.	1	1.5'	1.3'
							8.0'				
10	10.0'to SS 10.08'		68	1"		V.Dense		Cobbles	2	.08'	0
							13.5'				
	15.0'to SS 16.5'		7	6	7	Med.Comp. Wet		Brown c-f sand, little silt, trace of mica schist rock.	3	1.5'	1.5'
20	20.0'to SS 21.5'		8	8	10	"		Same as sample #3.	4	1.5'	1.3'
							21.5'				
								Bottom of Boring 21.5'.			
30											
								Installed 1 1/4" W.O. Well Point at 20.0' below grade and 2.0' above grade.			
40											

Proportions used: trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: R.K.

HELPER: A.D.

SOILS ENGINEER

DRILLING INSPECTOR

SAMPLE TYPE

C = CORED W = WASHED

SS = SPLIT SPOON

UP = UNDISTURBED PISTON

TP = TEST PIT

UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED. COMP.

30-50 DENSE

50+ VERY DENSE

TOTAL FOOTAGE:

Earth Boring 21.5' Ft.

Rock Coring Ft.

HOLE NO 17

REFERENCES

EPA - 670/2-73-053-E

"Recommended Methods of Reduction, Neutralization,
Recovery or Disposal of Hazardous Wastes" TRW Systems
Group, Redondo Beach, Calif. Aug. 1973

SPECIFICATIONS FOR ACID STORAGE TANKS, ALKALINE STORAGE TANKS,
AND VACUUM DECANT EQUIPMENT

<u>No. Req'd.</u>	<u>Description</u>
8	Acid storage tanks (T1 thru T8) FRP construction, Atlac 382 or equivalent, vertical, 10,490 gal. capacity, 12 ft., diameter x 15 ft. high, nominal 1/2 in. thickness, domed top, flat sloping bottom (3 in. per 12 ft.). Equipped with: (1) 24 in. side entering manway (2) two 3 in. flanged nozzles on top (3) one 3 in. flanged nozzle flush to bottom (4) one 1 in. flanged nozzle on side (5) hold down lugs (6) lifting lugs.
3	Alkaline storage tanks, (T9 thru T11) carbon steel construction, vertical, 10,000 gal. capacity, 12 ft. diameter x 12 ft. high, nominal 3/8 in. thickness, flat top, flat bottom, Equipped with: (1) 24 in. side entering manway (2) two 3 in. flanged nozzles on top (3) one 3 in. flanged nozzle flush to bottom (4) one 1 in. flanged nozzle on side.
2	Vacuum decant tanks, FRP construction, Atlac 382 or equivalent, vertical, 1000 gal. capacity, 5 ft. diameter x 7 ft. high, flat top with bolted cover on manway, flat bottom, vacuum rated to 25 in. mercury, one 2 in. flanged nozzle flush to bottom.
1	Decant vacuum pump, Lieman rotary vane or equivalent, model 107, 38 cubic ft. per minute displacement, equipped with 10 HP TEFC motor, 220 VAC.

SPECIFICATION FOR LIME SILO, REACTORS, SLUDGE STORAGE TANK
AND ALKALINE SULFIDE TANK

<u>No. Req'd.</u>	<u>Description</u>
1	Lime Silo, (T17) carbon steel construction, vertical, 2570 cu. ft. (40 ton capacity for hydrated lime), 12 ft. diameter x 20 ft. high, nominal 1/4 in. welded steel plate walls, flat top, 60° cone bottom, 8 in. x 8 in. wide flange H beam legs and concrete foundation. Equipped with: (1) 24 in. manhole, (2) inside and out ladder with safety cage, (3) 4 in. fill pipe, (4) Johnson-March bag house pulse-air dust collector, 1200 cu.ft./min. or equivalent, (5) bin vibrator with control and timer, (6) bin indicator for product level, (7) painted to Liqwacon specifications, (8) 8-in. tubular conveyor with 10 HP T.E.F.C. motor, 55 ft. long for delivery to reactors.
3	Portec Rotary Lime Gate (on reactor top), GR-10 or equivalent, 10 in. long x 17-1/4 in. wide, rubber seals, chain wheel operated,
3	Reactors, (R1 thru R3), FRP construction, Atlac resin 382 or equivalent, with dynel liner, vertical, 10,490 gal. capacity, 12 ft. diameter x 15 ft. high, nominal 1/2 in. thickness, domed or flat top, flat sloping bottom (3 in per 12 ft.). Equipped with: (1) four 3 in. flanged nozzles on top, (2) one 3 in. flanged nozzle flush to bottom, (3) one 3 in. flanged nozzle in side, (4) one 10 in. x 17-1/4 in. wide top opening (lime), (5) top center opening for agitator, (6) agitator mounts, (7) 3 in. dia. down pipe x 12 ft. long, (8) three 12 in. wide x 12 ft. long interior baffles, (9) four hold down lugs and, (10) 3 lifting lugs (11) 24 inch top manway.
3	Agitators. Chemineer Agitator 4 HTD-15-84 or equivalent; 84 rpm; continuous heavy duty service; 15 HP TEFC motor, 460 VAC three phase, 1,750 rpm; 2 1/2 in. agitator shaft, carbon steel, rubber coated, 124 in. long; 42 in. diameter turbine impeller, 4 blades, carbon steel, rubber coated; lip seal for reactor opening.
1	Treated Sludge Storage Tank (T13). Carbon steel construction, vertical, 10,000 gal. capacity, 12 ft. diameter x 15 ft. high, nominal 1/2 in. thickness, flat top, dished or sloping bottom, one 3 in. flanged nozzle on bottom, one 3 in. flanged nozzle on top, 24 in. side entering manway.
1	Alkaline Sulfide Tank (T15) carbon steel, vertical, 6000 gallon capacity, 8 foot diameter x 16 foot height, open top, sloping bottom, one 3 inch flanged nozzle on bottom, one 1 inch flanged nozzle on side.

SPECIFICATIONS FOR ROTARY VACUUM FILTER, PRECOAT SLURRY AND
FILTERED STORAGE TANKS

<u>No. Req'd.</u>	<u>Description</u>
1	Rotary Vacuum Filter. Komline-Sanderson or equivalent, carbon steel, 10 ft. diameter x 12 ft. long, precoat type with tank agitator, 377 sq. ft. filter area, 37 1/2% submergence. Equipped with: (1) Nash liquid ring seal vacuum pump Model 1002, 50 HP, 810 SCFM, (2) gas-liquid receiver, (3) 3 HP filtrate pump with TEFC motor, (4) two 3 HP filter drive motors, TEFC, (5) cake discharge assembly, (6) filter cake washing sprays.
1	Precoat Slurry Tank (T16) and Agitator. Tank, carbon steel construction, vertical, 2,000 gal. capacity, 6 ft. diameter x 10 ft. high, nominal 3/8 in. wall thickness, open top, and cone bottom. Equipped with 3 in. flanged nozzle on bottom center, and 3 HP mixer with slow speed, large bladed, propeller type agitator.
1	Filtered Storage Tank (T12) carbon steel, vertical, 5000 gal. capacity, 8 ft. diameter x 13 ft. high, nominal 3/8 in. thickness, flat top, flat bottom, equipped with: (1) two 3 in. flanged nozzles on top (2) one three inch flanged nozzle flush to bottom (3) one 1 inch flanged nozzle on side (4) 24 in. side entering manway.

SPECIFICATIONS FOR COPPER CEMENTATION EQUIPMENT

<u>No. Req'd.</u>	<u>Description</u>
1	Cementation Reactor. FRP construction, Atlat Resin 382 or equivalent, 1 ft. diameter x 9 ft. long, four internal baffles 1 1/2 in. high x 8 1/2 ft. long, 4 in. center openings with six inch extension on each end of the reactor, discharge end to be flanged and bolted.
1	Drive System. Motor, speed reducer, four rubber covered rollers to support reactor, reactor rotation variable from 2 - 12 rpm.
2	Acid Pump, Vanton Flex-i-Liner or equivalent, size 60A, 6.5 gpm at 10 psi discharge pressure, hypalon liner, polypropylene body block, 1/2 HP motor @ 1,750 rpm, 1 1/4 in. suction, 1 in. discharge.
1	Settling Tank. FVC construction or equivalent, 10 ft. long x 3 ft. wide x 4 ft. deep, baffled to remove scum on top surface, 1 in. overflow pipe to pump.

SPECIFICATIONS FOR CYANIDE EQUIPMENT

<u>No. Req'd.</u>	<u>Description</u>
1	Electrolytic Tank, PVC or polypropylene construction, 600 gal. capacity, 4 1/2 ft. long x 4 ft. wide x 5 ft. deep, equipped with (1) thirteen electrodes 1/8 in. thick x 44 in. wide x 46 in. long, (2) seven sq. in. copper bus bar.
1	Rectifier. 42KVA rectifier with 7,000 amps output, 0-6 volts D.C. variable.
1	Chlorinator. Capital Controls or equivalent, Advance Model 824, wall mounted gas chlorinator, 1000 lbs/day capacity including remote mounted vacuum regulator, flow meter with rate valve, DP regulator 2-inch and ejector check valve assembly.
1	Chlorination Tank. Carbon Steel, vertical, 5,000 gal. capacity, 8 ft. diameter x 13 ft. high, nominal 3/8 in. wall thickness, flat top, flat bottom, equipped with (1) two 3 in. flanged nozzles on top and, (2) one 3 in. flanged nozzle flush to bottom, (3) one 1 in. flanged nozzle on side.
1	Fume Scrubber. Heil Model 731 or equivalent, FRP construction, packed tower, 400 cu. ft. per minute air capacity, one ft. diameter x 11 ft. high, recirculation rate of 5 gpm, make up water rate of 0.5 gpm, 3 in. water static pressure drop, equipped with fan and recirculation pump, 6 in. discharge duct, 6 in. wide x 6 in. long gas inlet, fume removal efficiency of 98% or better.

SPECIFICATION FOR ACID FUME SCRUBBER

No. Req'd.

Description

1

Fume Scrubber. Heil Model 731 or equivalent, FRP construction, packed tower, 400 cu. ft. per minute air capacity, one ft. diameter x 11 ft. high, recirculation rate of 5 gpm, make up water rate of 0.5 gpm, 3 in. water static pressure drop, equipped with fan and recirculation pump, 6 in. discharge duct, 6 in. wide x 6 in. long gas inlet, fume removal efficiency of 98% or better.

SPECIFICATION FOR SULFUR DIOXIDE FEEDER

No. Req'd.

Description

1

Capital Controls or equivalent, Advance Model 824S, wall mounted gas sulfonator, 2000 lbs. per day capacity including remote mounted vacuum regulator flow meter with rate valve, D.P. regulator and 2-inch ejector check valve assembly.

SPECIFICATIONS FOR PUMPS

<u>No. Req'd.</u>	<u>Description</u>
3	Acid Pumps (P1 thru P-3) Vanton Chem-Guard heavy duty centrifugal pump or equivalent, Model CG-PY 1200B, polypropylene construction, 200 gpm at 45 ft. total discharge head, 3 in. suction, 2 in. discharge, 150 lb. flanged connections, John Crane #9 Mechanical Seal QP61M010M with water flush; 7 1/2 HP TEFC motor, 1,800 rpm, 230/460 VAC, 3 phase; motor, base, and pump supports epoxy coated.
7	Alkaline and Sludge Pumps. (P4 thru P10) Gorman Rupp centrifugal or equivalent, Model 13A2B, carbon steel, 300 gpm at 20 ft. total discharge head, self priming, 3 in. female NPT connections, titanium shaft, tungsten carbide seal, oil lubricated seal, 3 HP TEFC motor at 1,800 rpm, 230/460 VAC, 3 phase.
4	Sump Pumps. (P15 thru P18) Vanton Flexi-Liner or equivalent, size 60A, 6.5 gpm at 10 psi discharge pressure, hypalon liner, polypropylene body block, 1/2 HP motor @ 1750 rpm, 1 1/4 in. suction, 1 in. discharge.

SENA
THOMASTON

BENCH MARK ELEV. 324.54
N.E. COR. OF GRANITE
PLANTED IN FRONT OF
TREATMENT PLANT

SYMBOLS & ABBREVIATIONS

- ⊕ BORING LOCATION STAKED
- ⊙ BORING OR TEST MADE
- FENCE LINE
- - - TOP OR TOE GRAVEL
- - - TOP OR TOE ROCK FILL
- T.H. TEST HOLE
- S.P. SEEPAGE PIT
- OBS. WELL OBSERVATION WELL

TOPOGRAPHIC PLAN FOR LIQWACON CO.

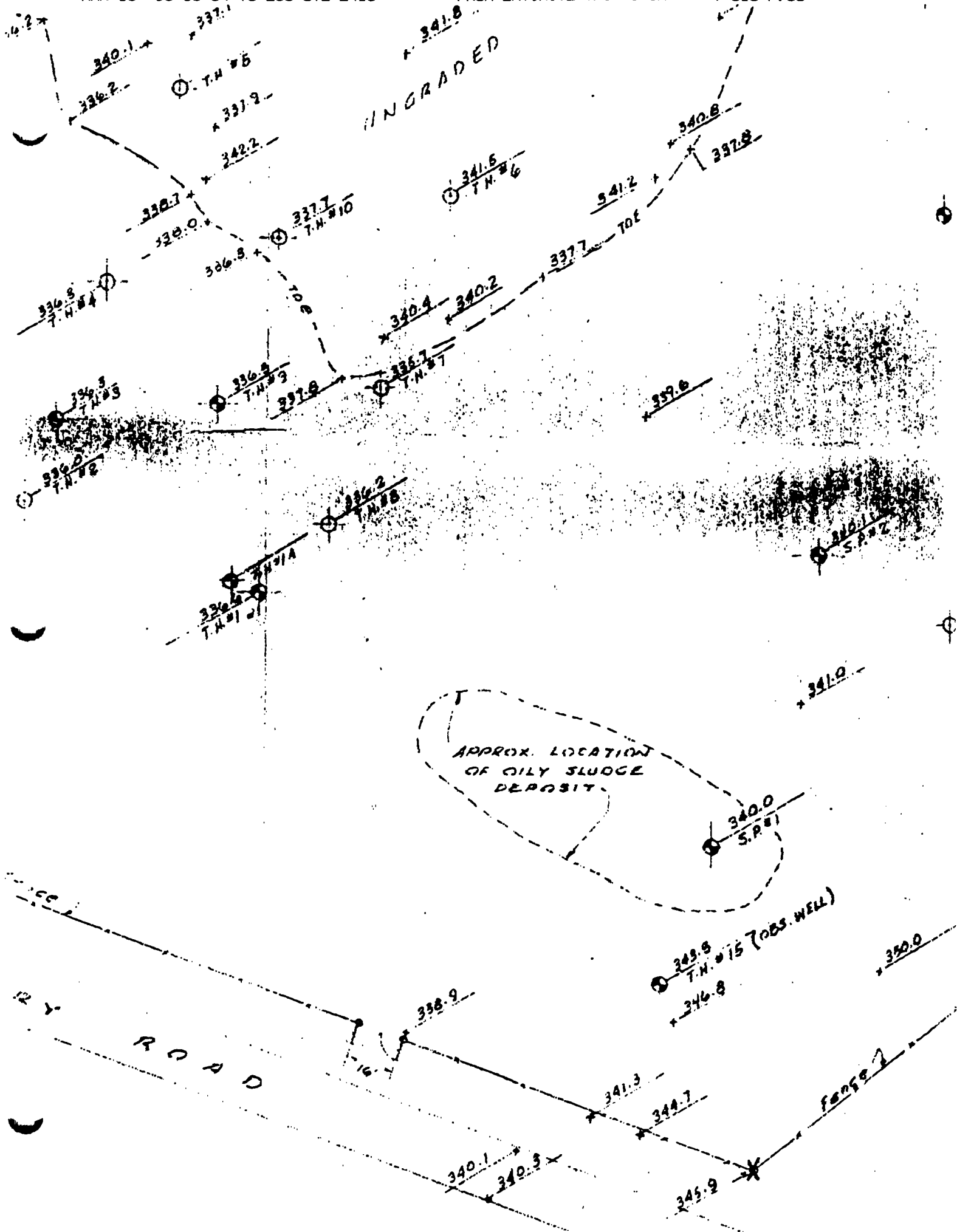
PROPERTY OF SAVIN BROS.
THOMASTON, CONNECTICUT

SCALE: 1" = 40'

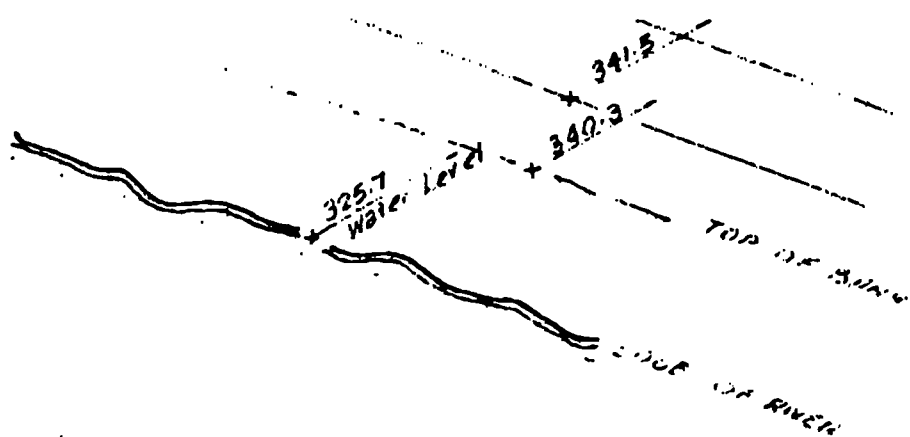
DATE: FEB. 4, 1975

THE MINGES ASSOCIATES

FARMINGTON, CONN.



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APPENDIX C
EXPLORATION AND SAMPLING METHODOLOGIES

FIELD METHODS

SOIL BORINGS, SAMPLING and WELL INSTALLATIONS

Soil borings were performed at the site to collect subsurface soil and residue samples. The borings were advanced with either 4¼ inch or 2¼ inch hollow stem augers (when possible, the 2-1/4 inch augers were used to reduce the volume of auger spoils). No water was used during the advancement of the soil borings. Soil samples were collected from each boring using a 2 inch or 3 inch diameter, 24 inch long, split spoon sampler. Three inch diameter spoons were used to recover a sufficient volume of soil for laboratory analysis. Soil samples were collected at intervals described in the RFI Work Plan or based on field conditions. Specific sampling intervals are discussed in Sections 6.2.2, 7.2.2 and 8.1.

When sampling locations could not be accessed with a drill rig, or sampling depths did not require a drill rig, soil samples were collected by hand using a decontaminated metal trowel or shovel. All hand digging tools were decontaminated prior to sampling each location as described below.

GZA personnel observed the boring installations, logged soils, and collected soil samples. Each soil sample was described according to the Burmister Soil Classification System. All soil samples were collected in laboratory provided glassware and refrigerated after collection. All soil samples were transported on ice with a chain-of-custody to a certified laboratory for analysis.

Soil samples were field screened using headspace methods for total VOCs with a portable 11.7 eV HNu Model PI-101 or portable Thermo Environmental Instruments organic vapor meter (OVM) Model 580B (either 10.6 eV or 10.0 eV) photoionization detector (PID).

Total VOC headspace readings were recorded on the boring logs in ppm above background values relative to an isobutylene standard. All PIDs were calibrated daily; calibration data was recorded to track equipment performance.

All drilling equipment (augers, rods, etc.) were decontaminated prior to use in each hole using a steam cleaner. All split spoon samplers were decontaminated with a non-phosphate detergent scrub, tap water rinse, 20% methanol solution rinse and a final distilled water rinse prior to each use. A baking soda and water scrub was added as the first decontamination step for split spoons coated with treatment residues from the landfill. All fluids generated by the decontamination and cleaning of the drilling equipment was collected and disposed of by Envirite.

Observation wells were installed in all "MW" series borings completed at the site. Boring logs which show installation details for each well are included in Appendix D. Monitoring wells were constructed of 2-inch inside diameter (ID) PVC plastic riser pipe and 5 to 10 foot long screen sections. A filter of clean silica sand was placed in the annular space

around the well screens and a three to five foot thick bentonite seal was placed above the sand pack. The annular space above the bentonite seal was filled with concrete or bentonite grout. Each monitoring well was completed with a locking stand pipe placed in a concrete collar.

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APPENDIX C

SOIL GAS SURVEY METHODOLOGY

Soil gas samples were obtained at this site by driving a small diameter (1/4" I.D./1/2" O.D.) stainless steel tube ("probe") into the ground. The end of the probe was capped with a drive tip to prevent soil from entering the tube and to facilitate probe advancement. After being driven to the specified depth, the four foot long probe was withdrawn approximately three inches and the driving tip was ejected into the space below using a ramrod.

Once the probe was in place, a gastight, three-way valve was secured to the top of the probe. The valve was plumbed to have an off position, a septum port for sampling, and a position leading to a positive displacement, SKC air sampling pump. Prior to the collection of a soil gas sample, the probe was purged of ambient air. During purging, the total VOC concentration at the pump discharge was monitored using a TEI Model OVM 580B photoionization detector. Purging was stopped when the total VOC reading reached a maximum, or after two minutes of pumping. The valve was then closed to allow air pressure within the probe to equilibrate prior to sampling.

Soil gas samples were withdrawn from the septum port using a gastight syringe. The sample was immediately injected into a Photovac 10S50 portable gas chromatograph (GC) and/or a Perkin Elmer Sigma 2000 GC equipped with an electron capture detector. The GCs were equipped with 15 meter long SPB-1 capillary columns. The Photovac operated at ambient temperature while the Perkin Elmer GC was temperature programmed to range from 45°C to 100°C. VOC standards were prepared and injected to allow identification and tentative quantitation. Compound identification was based on matching retention times. The electron capture detector is especially sensitive to chlorinated compounds. VOC standards used for this GC included PCE, TCE, 1,1-DCE, trans-1,2-DCE, 1,1,1-TCA, and 1,2-DCA. Attempts to identify vinyl chloride using this apparatus were unsuccessful. The Photovac GC was used to analyze for non-chlorinated compounds (benzene, toluene).

Concentrations were estimated by comparing the samples peak height with the peak height of the standards. Concentrations of additional compounds were tentatively quantified by relative comparison to peaks of known standards. Results of these analyses are presented on Table 6-1. Ambient air blanks were collected and analyzed at least once per day to verify that no residual VOCs were being carried over between runs. Ten percent of the soil gas samples were collected and analyzed in duplicate. Control point sample locations were sampled each day to check for consistency.

Sampling probes were decontaminated between each sampling point with a non-phosphate detergent scrub, tap water rinse, 20% methanol solution rinse, final distilled water rinse and allowed to air dry. Each probe was purged with ambient air prior to sampling. Each probe was monitored with a PID to check for cross-contamination between samples. Air samples were collected from ten percent of the decontaminated probes to check for cross-contamination.

FIELD METHODS

BOREHOLE PERMEABILITY TEST METHODOLOGY

Borehole permeability tests were performed by measuring the static depth to water in a well prior to testing. A pressure transducer connected to a data logger was lowered into the well and suspended near the bottom of the well. A clean, dedicated intake pipe (with foot valve) connected to an above ground centrifugal pump was lowered into the well to a level just above the pressure transducer. The water level within the well was allowed to stabilize to the static level after the insertion of the equipment and prior to starting the pump. Pumping of the well was commenced and maintained at a constant rate. The discharge rate was measured using a calibrated bucket and stop watch. If the water level in the well stabilized to within 0.1 feet during pumping for at least three minutes, pumping rate and stabilized drawdown were recorded.

If a stable drawdown and pumping rate could not be reached and the water level drew down to the pump intake, the pump was turned off and the data logger was turned on. The data logger recorded the rise of the water level in the well to within at least 90% of the recovery to the static water level.

The stabilized drawdown data were analyzed using the following equation (Hvorslev, 1951);

$$K = \{Q \ln[T + \sqrt{1 + TT}]\} / (2 \pi L H_c)$$

Where:

D (feet)	=	well casing diameter
K(feet/second)	=	average hydraulic conductivity
Kh(feet/second)	=	average horizontal hydraulic conductivity
Kv(feet/second)	=	average vertical hydraulic conductivity
Hc (feet)	=	constant drawdown maintained during pumping
L (feet)	=	length of well screen or well screen and filter sandpack below the water table
ln(dimensionless)	=	the natural logarithm operator
M(dimensionless)	=	transformation ratio $\sqrt{K_h/K_v}$; assumed to equal 3.16
Pi (dimensionless)	=	the ratio of a circle's circumference divided by its diameter, approximated as 22/7
Q (cubic ft/second)	=	constant withdrawal rate maintained during pumping
T(dimensionless)	=	the ratio (ML/D)

The variable drawdown data were analyzed using the Bouwer-Rice method as implemented by the computer program AQTESOLV Version 1.1, by the Geraghty and Miller Modeling Group, Reston, VA.

FIELD METHODS
STEP TEST/PUMP TEST METHODOLOGY

A submersible pump was placed approximately 50 feet below grade inside the deep overburden extraction well EX-1. The pump was powered using a portable diesel generator. The discharge line from the pump was attached to a former non-contact cooling water line that discharges to the Naugatuck River. Discharge of pumped water was permitted by the Connecticut DEP (Temporary Authorization granted December 9, 1994). The discharge permit and monitoring data are attached.

Pressure transducers and dataloggers were set to monitor drawdowns in wells EX-1, MP-2, MW-41S, MW-41D, MW-41B, MW-42S, MW-42B, MW-43S, MW-43B, MW-44S, MW-44D, and MW-44B. Data was collected continuously from 18:00 hours on December 15 1994 through 09:00 hours on December 27, 1994. The dataloggers were downloaded approximately every 6 to 12 hours using a portable computer. Manual data were also collected from these wells during the step test. During the pump test, additional manual monitoring points were added to those established during the step test:

ADDITIONAL PUMP TEST MONITORING LOCATIONS			
Surface Water Locations	Shallow Overburden	Deep Overburden	Bedrock
BBP-1	MW-30	MW-31D	MW-31B
BBP-2	MW-31S	MW-32D	MW-37B
BBP-3	MW-32S	MW-37D	MW-51B
BBP-4	MW-33	MW-51D	MW-55B
NRP-1	MW-36	MW-52D	MW-61B
NRP-2	MW-50S	MW-53D	MW-62B
NRP-3	MW-61S	MW-61D	-
-	MW-62	-	-
-	MW-63	-	-

Well MW-51D was also instrumented for the recovery. Water level data from the pump test are provided in this Appendix.

Data collection points at the Envirite facility located in Thomaston, Connecticut are identified using the following system:

EX-1	extraction well
MW-42S	shallow overburden monitoring well
MW-43D	deep overburden monitoring well
MW-42B	bedrock monitoring well
MP-1	piezometer
BBP-1	Branch Brook piezometer/staff gage
NRP-1	Naugatuck River piezometer/staff gage

The data were corrected for drift in the zero-drawdown values prior to each phase of the tests, including the step test, the pump test, and the recovery period.

FIELD METHODS

STREAM SURVEY

SURFACE WATER

Stream Flow Measurements

Velocity measurements were collected at each of the three primary transects identified along the Naugatuck River (NRT-2, NRT-3, and NRT-4) and the Branch Brook (BBT-2, BBT-3, and BBT-4). Measurements were collected during low flow (October) and high flow (April, May) periods. A Marsh-McBirney, Inc. Flo-Mate, Model 2000 Portable Water Flow Meter was used to collect the velocity measurements. The flow meter was calibrated to a flow rate of 0.0 feet/second before collecting measurements at each transect. Protocols outlined by the USGS in "Techniques of Water-Resources Investigations of the United States Geological Survey" as well as the protocols established in the Envirite Corporation RFI Work Plan (Section 27.1.1) and the "Alternative Proposals to RFI" document were generally followed; however, velocity measurement depths were modified as described below.

Transect locations were initially placed as described in the Questions and Concerns section of "Alternative Proposals to RFI". The locations were then slightly adjusted upstream and downstream to best meet the following conditions: 1) a straight reach of the river; 2) a stable streambed, free of large rocks and weeds, which would create turbulence; and, 3) a flat streambed profile to eliminate vertical components of velocity. At each transect, the width of the river was divided into fifteen equal increments. Water depth and flow velocity measurements were collected at the midpoint of each increment.

The following protocols were employed during the April 28, 1994 velocity measurement event at the Branch Brook primary transects and the May 3, 1994 event at the Naugatuck River primary transects. At the midpoint of each increment, the flow meter was placed upstream of the person measuring velocity and perpendicular to the stream flow. The velocity was measured for a twenty second interval and the flow meter measured an average velocity for the twenty second period. At depths less than a foot, velocity measurements were collected at 60% of the total depth only (Six-tenths-depth method). At depths between one and two feet, velocity measurements were collected at 20% and 80% of the total depth (Two Point Method). At depths greater than two feet, velocity measurements were collected at 20%, 60%, and 80% of the total depth (Three Point Method).

To calculate the flow velocity using the three point method (depths greater than two feet) the velocity measured at 60% depth was multiplied by two and added to the 20% and 80% measurements. The sum was divided by four to yield the average velocity. To calculate the average velocity using the two point method (at depths between one and two feet) the sum of the 20% and 80% measurements was divided by two. The average velocity for each increment multiplied by the total area of each increment (determined by multiplying the depth times the width of the increment) to calculate the discharge for each increment. The sum of the discharge rates across each transect yields the total discharge for the river at the transect.

During the October 4, 1994 measurement event at the Naugatuck River primary transects and the October 5, 1994 measurement event at the Branch Brook primary transects, velocity measurements were collected at 20%, 60% and 80% of the total depth when the stream depths exceeded one foot. The discharge rates for transects with water depths greater than one foot were calculated with the two-point method data and the three-point method data to validate the change in sampling protocol and to validate the April and May velocity measurements. The difference in total discharge rates was less than five percent.

Chemical and Physical Parameters (Water Quality)

Chemical and physical parameters (water quality parameters), as described in Section 27.1.1 of the RFI Work Plan, were also measured at each of the three primary transects along the Naugatuck River and the Branch Brook. The temperature, pH, specific conductivity and dissolved oxygen were measured with a Hydrolab Corporation H2O Scout 2 system. The Scout 2 System maintains a separate, submersible probe for each parameter and is designed to collect measurements in-situ. Specific conductance and pH probes were individually calibrated to standard solutions and the dissolved oxygen probe was calibrated based on an elevation/temperature conversion prior to collecting data at each transect. Measurements were collected in a similar manner to the stream flow measurements. Fifteen equal increments were identified along each transect. Water depth measurements were collected at the midpoint of each increment. The Scout 2 system maintains separate probes of varying lengths for each individual chemical and physical parameter. The length of the monitoring zone on the probe is 0.4 feet. Therefore, water quality measurements were collected at 60% of the total depth when the stream depth was less than two feet. When the stream depth exceeded two feet, water quality measurements were collected at 20%, 60%, and 80% of the total depth. During collection of the water quality data, the probe was placed upstream of the person collecting the data.

The Hydrolab H2O Scout 2 System provided fluctuating results for each of the four parameters, particularly dissolved oxygen and temperature. Measurements typically fluctuate from 1 to 3%. Representative values were selected by averaging the highest and lowest readings.

Surface Water Sampling

Surface water sampling was conducted as described in Appendix W of the RFI Work Plan. Surface water sample locations are depicted on Plate 51 of the Work Plan. All sample locations were accessible by foot. Grab samples were collected by submerging the sample container directly into the surface water. All containers were rinsed thoroughly with water from the sample location prior to collecting the sample. Samples were collected from below the surface to avoid any surface films. Field personnel wore dedicated gloves for each sample location and samples for TOX, TOC, and semi-volatiles were collected first at each location, while the remaining samples were collected in order of decreasing volatility as defined in Appendix W of the RFI Work Plan. All samples were collected upstream of the sampler so as not to disturb the sample during collection. Sample collection proceeded from downstream locations to upstream locations.

SEDIMENT

Sediment Thickness Determination

Soft sediment thicknesses were measured at fifteen locations across the primary and secondary transects of the Naugatuck River and the Branch Brook. Soft sediment thicknesses were also measured at 21 intermediate sample locations along the Naugatuck River and 30 intermediate sample locations along the Branch Brook. The intermediate locations were selected as likely depositional areas, quiescent and low flow velocity areas. Soft sediment depth was measured by inserting a 1/2 inch diameter rod into the stream bottom by hand. As explained in Section 27.1.2 of the RFI Work Plan, the depth of penetration indicates the thickness of fine grained material that has been deposited.

Sediment Sampling

Initial Characterization

Initial stream sediment sample collection at the transects and intermediate sample locations was performed with a hand held soil auger. The samples were catalogued in the field on a qualitative basis for color and grain size using the Burmister Soil Classification System. Based on this initial sampling, ten preliminary sampling locations were selected along the Naugatuck River and ten locations were selected along the Branch Brook.

Preliminary and Final Sampling For Analyses

Sediment samples collected for preliminary analyses and for contaminant characterization were collected with a Wildco hand held stainless steel sediment corer Model No. 2420-H45. Samples were removed from the sediment corer with dedicated wooden tongue depressors and placed into appropriate sample containers. Ice packs were used to preserve samples at 4 degrees Celsius immediately after collection.

The corer was inserted by hand into the sampling locations along the stream bottom. Samples were collected at multiple depths at three locations along Branch Brook; however, the density and grain size of sediments in the Naugatuck River prevented the collection of samples at multiple depths in the Naugatuck River.

Decontamination

The sediment corer was thoroughly decontaminated between collection of each sediment sample. The corer was scrubbed with alconox followed by a tap water rinse, a 20% methanol solution scrub and a final de-ionized water rinse.

SEEPAGE METERS

Three seepage meters were installed by hand in Branch Brook. Shallow watercourses with rocky stream bottoms in the Naugatuck River and in certain areas of Branch Brook prevented additional seepage meter installations.

A typical seepage meter is diagrammed on Figure 30-4 of the RFI Work Plan. The three seepage meters were not sampled for any analytical parameters as part of the site investigation. The meters were sampled; however, for discharge information for Branch Brook. Samples were collected as indicated in Section 30.3.1.1 of the RFI Work Plan.

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APPENDIX D
BORING LOGS

Liquicon
PROJ. Thomaston, CT.
CLIENT FUSS & O'NEILL

BORING NO. W-30

BORING NO. _____

LINE & STA. _____

LINE & STA. _____

OFFSET _____

OFFSET _____

GR. ELEV. _____

GR. ELEV. _____

STATION	STRATUM DESCRIPTION	BLOWS PER ____	B
1	SAND	10	10
2	CLAY	5	5
3	SAND	15	15
4	CLAY	10	10
5	SAND	20	20
6	CLAY	15	15
7	SAND	10	10
8	CLAY	5	5
9	SAND	15	15
10	CLAY	10	10
11	SAND	20	20
12	CLAY	15	15
13	SAND	10	10
14	CLAY	5	5
15	SAND	15	15
16	CLAY	10	10
17	SAND	20	20
18	CLAY	15	15
19	SAND	10	10
20	CLAY	5	5
21	SAND	15	15
22	CLAY	10	10
23	SAND	20	20
24	CLAY	15	15
25	SAND	10	10
26	CLAY	5	5
27	SAND	15	15
28	CLAY	10	10
29	SAND	20	20
30	CLAY	15	15
31	SAND	10	10
32	CLAY	5	5
33	SAND	15	15
34	CLAY	10	10
35	SAND		

A	STRATUM DESCRIPTION	BLOWS PER _____	B
---	---------------------	--------------------	---

0.0	gr. fine-crs. sand, gravel, boulders or dumped ledge		
7.0			
12.0	blk. & gr. silt, tr. fine sand		
16.0			
20.0	gr. fine-crs. sand, occasional stones		
25.0	cored: boulders & cobbles RUN #1 rec. 39"		
	br. fine-crs. sand, tr. fine-crs. gravel, tr. silt, occasional 3"-6" cobbles		
45.0			

[illegible]

1. COL. A strata depth
2. COL. B _____
3. HAMMER = 140N; FALL 30"

Two Printers

AND - 40 to 50%

CLARENCE WELTI ASSOC., INC.
P.O. BOX 387
GLASTONBURY, CONN. 06033

"BORING LOG"

PROJ. Liquicon; Thomaston, CT.
CLIENT FUSS & O'NEILL

BORING NO. W-31
LINE & STA. _____
OFFSET _____
GR. ELEV. _____

BORING NO. W-32
LINE & STA. _____
OFFSET _____
GR. ELEV. _____

A STRATUM DESCRIPTION		BLOWS PER	B
0.5	topsoil		
	gr. fine-crs. sand, tr. fine-crs. gravel		
5.0			
	gr. fine sand, little silt w/ fine-crs. sand layers		
14.0			
15.0	possible dry paint end of fill @ 15'		
	br. med-crs. sand, some fine-med. gravel		
19.0			
20.0	wood		
	br. med-crs. sand, some fine-med. gravel		
31.5			
	BOTTOM OF BORING 31.5' WATER AT 12.5 @ 0 hrs.		
	WELL @ 27.0'		
	<u>Materials</u>		
	10' screen (wrapped)		
	18' riser		
	1 protector pipe w/lock		
	Bentonite seal @ 15'		
	Note: strong sweet odor in samples 2 & 3		

A STRATUM DESCRIPTION		BLOWS PER
	gr. fine-crs. sand & dumped ledge	
12.0		
	gr. crs. sand & fine-crs. gravel, occasional cobbles	
26.5		
	BOTTOM OF BORING 26.5' WATER @ 14.9 on 3/2/81	
	WELL @ 25.0'	
	<u>Materials</u>	
	10' screen (wrapped)	
	17' riser	
	1 5' protector pipe w/lock	
	Bentonite seal @ 13'	
	DATE: 2/27/81	
	DRILLER: BARACCO	

1. COL. A _____
2. COL. B _____
3. HAMMER = 140'; FALL 30"

DATE: 2/25-26/81
DRILLER: BARACCO

True Print

AND - 40 to 50%
SOME - 10 to 40%

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040	PROJECT/LOCATION		BORING NO. <u>MW-31B</u> SHEET <u>1</u> OF <u>2</u> JOB. NO. <u>91-580</u>
	Envirite Corp.		
	Thomaston, Connecticut		

DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>R.R.K. / C.J.F.</u>	BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>02/08/93</u> DATE FINISHED <u>02/09/93</u>
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DRILLING METHOD <u>Hollow Stem Auger</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: center;">WATER LEVEL MEASUREMENTS</th> </tr> <tr> <th style="width: 25%;">DATE</th> <th style="width: 25%;">MS. PT.</th> <th style="width: 25%;">WATER AT</th> <th style="width: 25%;">HR AFTER COMPLETION</th> </tr> <tr> <td>02/08/93</td> <td>Ground</td> <td>12.00</td> <td></td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	WATER LEVEL MEASUREMENTS				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION	02/08/93	Ground	12.00									
WATER LEVEL MEASUREMENTS																					
DATE	MS. PT.	WATER AT	HR AFTER COMPLETION																		
02/08/93	Ground	12.00																			

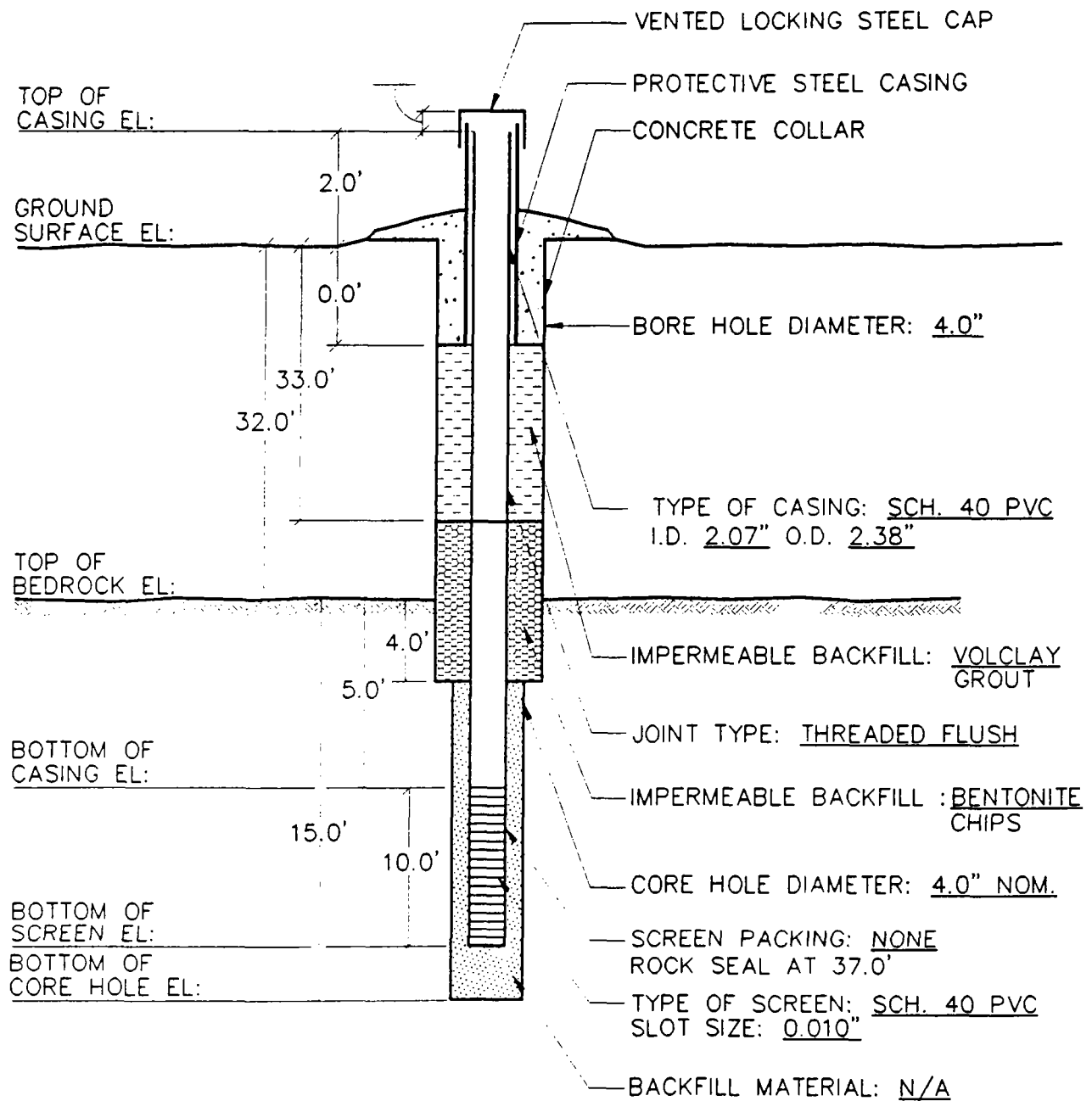
DEPTH (ft.)	CASING blow/R	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (ft.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
0.0		G-1	0-2	Grab	-		SAND, F; trace M; little silt; trace mixed gravel and cobbles; dark yellowish brown.		0 ppm	0.0
2.0										2.0
4.0		S-2	5-7	11/11	5	80(5')	5-5.5': Sand, F, and to some silt; dark yellowish brown.		0 ppm	4.0
6.0							5.5-7': WOOD.			6.0
8.0										8.0
10.0		S-3	11-13	24/14	7	5	10.9': Wood ends per driller. SAND, F; trace M; and to some silt; grayish black, moist. Paint odor.		146 ppm	10.0
12.0					5	6				12.0
14.0		S-4	15-17	24/4	2	5	Same as above, wet.		217 ppm	14.0
16.0					3	3	Ocassional cobbles and boulders.			16.0
18.0										18.0
20.0		S-5	20-22	24/14	8	24 18 14	20-20.5': SAND, VC-F; little to some silt; little F gravel; trace mica plates up to 1/4 inch; dusky yellowish brown.		24 ppm	20.0
22.0							20.5-22': Same as above, except trace gravel, moderate yellowish brown.		4 ppm	22.0
24.0		S-6	25-27		16	11	25-26.5': SAND, F-M; trace C and VC; trace to little silt; trace gravel.		34 ppm	24.0
26.0					15	18	26.5-27': SAND, VC-C, subangular; trace M-F; trace silt; trace to little granules; dark yellowish brown.		8 ppm	26.0
28.0										28.0

PROPORTIONS USED TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50% perfil/wellog04	BORING METHOD HSA Spin Casing NQ Core	DEPTH 0 - 32 16 - 33 33 - 47.2	REMARKS: FIELD INSTRUMENT = OVM 580B (isobutylene) 2" ID No. 10 Slotted Screen set 37 to 47 ft. Rock Seal at 37 ft. Bentonite Chips 33 to 37 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.
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BORING NO.
MW-31B

[illegible]

WELL NO. MW-31B



FUSS & O'NEILL
consulting engineers

147 HARTFORD BLVD. HARTFORD, CONNECTICUT 06104
(203) 646-1445

WELL CONSTRUCTION DETAILS
MW-31B

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W31B.DWG

FUSS & ONEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040				ROCK CORE LOG				BORING NO. MW-31B SHEET 1 OF 1 JOB NO. 91-580				
PROJECT: Envirite Corp.				LOCATION: Thomaston, Ct								
DRILLING CO.: Arbor Drilling				DATE STARTED: 2/9/93				DATE FINISHED: 2/9/93				
DRILLER: Dave Kowaleski				GROUND ELEVATION:								
CORING METHOD: NQ Core Barrel/Roller Bit				CORE DIAMETER: 3 7/8"								
FUSS & O'NEILL REPRESENTATIVE: C. Frey												
DEPTH	COMMENTS TESTS INFLUENCE CORING RATE AND SMOOTHNESS CORING FLUID LOSS	CORE RUN LENGTH AND RECOVERY(%)	CORE LOSS ZONE	DISCONTINUITIES				LITHOLOGY				GRAPHIC LOG
				ROD	FRACURES PER FOOT	DESCRIPTION TIGHTNESS SPACING PLANARITY SMOOTHNESS FILLING	ORIENTATION ALTERATION STAINING WEATHERING STRUCTURE	MINEROLOGY CLASSIFICATION COLOR GRAIN SIZE ALTERATION FORMATION NAME	CEMENTATION HARDNESS WEATHERED STATE TEXTURE ORIENTATION SPACING			
33	Core rate 2 ft./min. Smooth coring Little fluid loss	7' 91.4%	0.6'	100 %		Tight fractures, fresh, nonplanar. No filling or staining.		Granitic gneiss with poorly developed bands of biotite, grayish white, fine to medium grained. Core clean unweathered with fresh breaks.				
40	Core rate 0.4 ft./min. Smooth coring Little fluid loss	7' 91.4%	0.6'	100 %		Same as above.		Same as above.				
47												
perfill/r-core3												

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-31B**

Date of Completion: **2/9/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Chris Frey

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **47 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes **X** No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **37 to 47 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **39 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing;

Locking **X** or Threaded Cap

Impermeable Backfill:

Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **7, 7.2 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **33 to 37 ft.**

O-ring Seals: Yes: ☒ No:

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

Inferred Relationship to Plume; Within Outside Edge

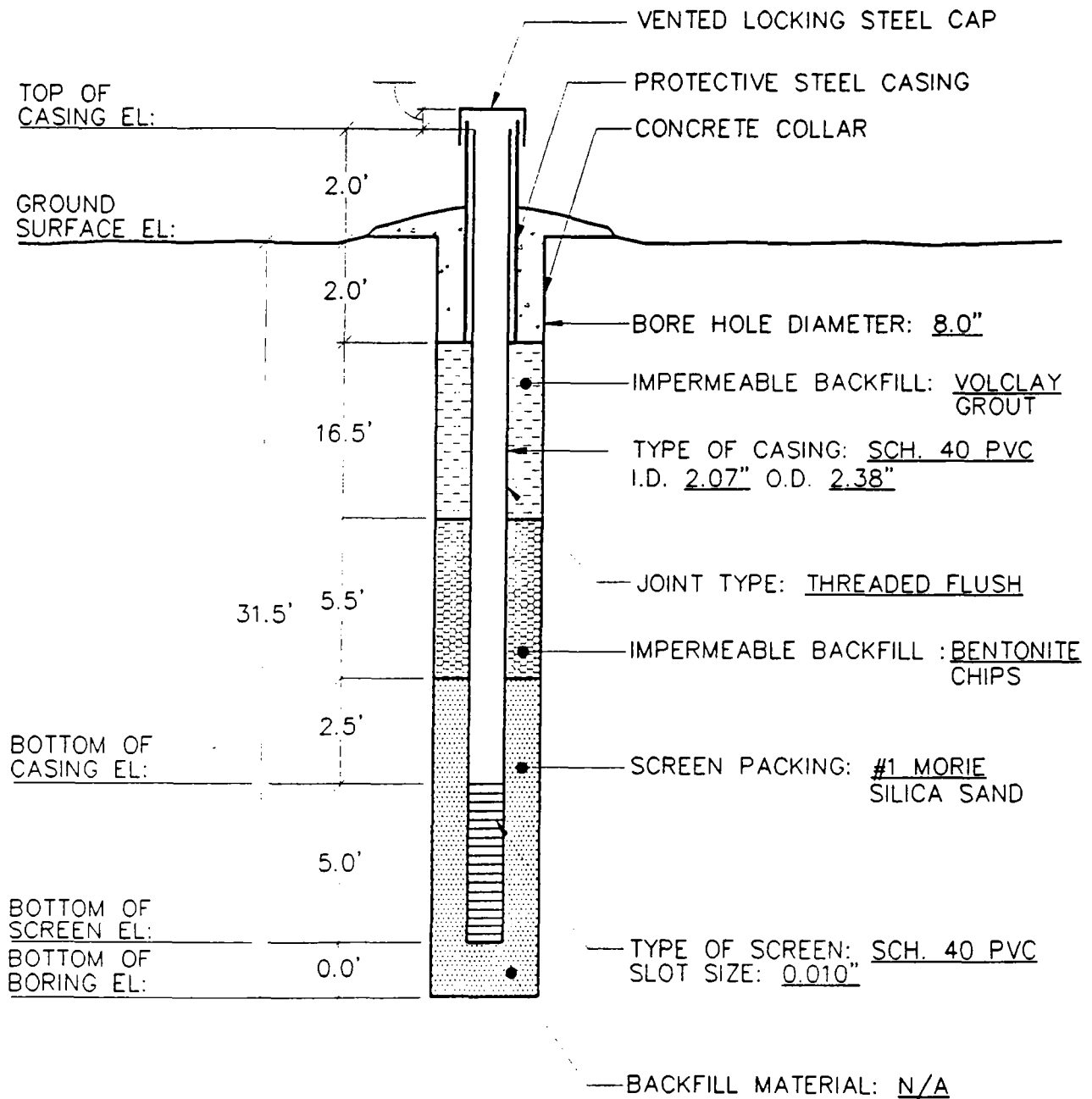
Watershed (Plume Discharge Watercourse): **Naugatuck River**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040		PROJECT/LOCATION		BORING NO. <u>MW-31D</u> SHEET <u>1</u> OF <u>1</u> JOB. NO. <u>91-580</u>					
		Envirite Corp.							
		Thomaston, Connecticut							
DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>				BORING LOCATION <u>~ 5' North of MW-31B</u> GROUND ELEVATION _____ DATE STARTED <u>02/10/93</u> DATE FINISHED <u>02/11/93</u>					
DRILLING METHOD <u>Hollow Stem Auger</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>				WATER LEVEL MEASUREMENTS					
				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION		
				02/10/93	Ground	13.00			
DEPTH (FT)	CASING blows/ft	SAMPLE			SAMPLE DESCRIPTION		USCS	FIELD TESTING	DEPTH (FT)
		NO.	DEPTH (ft)	PEN REC.					
							0-22': No samples taken. Refer to Boring Log for MW-31B for stratigraphic description.		
22.0		S-1	22-24	24/18	4 8 14 21		22-23.5': SAND, C-VC; trace to little F; trace to little silt; trace F-M subrounded gravel and granules.	0.6 ppm	22.0
23.0							23.5-24': SAND, F-M; little to trace C; little silt; trace gravel; dark yellowish brown, wet.		23.0
24.0		S-2	24-26	24/16	11 10 12 16		24-25': Same as above. 25-26': SAND, F-M; trace C; little silt; dark yellowish brown.	3-8 ppm	24.0
25.0									25.0
26.0		S-3	26-28	24/18	10 12 20 21		26-27': Same as above. 27-28': SAND, F-M; little C; trace to little silt; trace F-C	2 ppm	26.0
27.0							subrounded to subangular gravel; dark yellowish brown.		27.0
28.0		S-4	28-30	24/18	10 13 8 21		Same as above, except little gravel after 29.5 feet.	2 ppm	28.0
29.0									29.0
30.0		S-5	30-32	11/11	30 80 (5")		SAND, F-C; little to some silt; little F-M gravel and greissic rock fragments; dark yellowish brown.	3 ppm	30.0
31.0							31.5': Auger refusal.		31.0
32.0									32.0
PROPORTIONS USED		BORING METHOD		DEPTH		REMARKS: FIELD INSTRUMENT = OVA 580B (ppm isobutylene) 0.010" PVC Screen set 26.5 to 31.5 ft. #1 Morie Sand 24 to 31.9 ft. Bentonite Chips 18.5 to 24 ft. Voiclay grout 2 to 18.5 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.			
TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50%		HSA		0 - 31.5					
perfill/wellog04						BORING NO. MW-31D			

WELL NO. MW-31D



FUSS & O'NEILL
INC.
consulting engineers
147 HARTFORD ROAD, HARTFORD, CONNECTICUT 06100
(203) 646-7446

WELL CONSTRUCTION DETAILS
MW-31D

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W31D.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-31D**

Date of Completion: **2/11/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Robert Kovach

Well Construction Method: **Hollow Stem Auger**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **31.5 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes **X** No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **26.5 to 31.5 ft.** :

Length of Screen: **5 ft.**

Length of Riser Pipe: **28.5 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes **X** No:

If Yes, Thickness: **12.5 ft.**

Well Inside Diameter: **2.07"**

Material: **Morie Silica Sand**

Grain Size: **#1**

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Time Spent Developing:

Impermeable Backfill:

Volclay Grout

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Locking **X** or Threaded Cap

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length: **N/A**

Water-Bearing Rock Unit: **N/A**

Water-Bearing Sections (Depths and Approximate Yields): **N/A**

Length of Rock Cores: **N/A**

Diameter of Core Hole: **N/A**

Thickness and Depth of Impermeable Backfill: **N/A**

O-ring Seals: Yes: No:

GEOLOGIC INFORMATION

Aquifer: **Overburden**

Inferred Relationship to Plume; Within Outside Edge

Watershed (Plume Discharge Watercourse): **Naugatuck River**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

Glenn Drilling Inc.

5000 Main Road
Colchester, Ct 06415
(203) 887-3621

CLIENT Fuss & O'Neill

PROJECT NAME Site No. 02-129

LOCATION Thomaston, CT

BORING
NUMBER
MW-321

SHEET

No. 1
of 1

DRILLER Mike Deane

ARCHITECT
ENGINEER

FILE NO. _____

INSPECTOR Rick

TYPE Casing HSA Sampler SS Core Barrel

SURFACE ELEV. _____

DATE START July 1, 1986

SIZE I.D. 3 1/4" 1 1/2"

LINE & STATION _____

DATE FINISH _____

HAMMER WT. 140#

HAMMER FALL 30"

OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-1	0-1.5'	7	9	18	0.7			Cobbles. Brown Fine-Medium Sand layers.
5'	S-2	5.0'-6.5'	4	7	3	0.8			Brown Fine-Coarse Sand. Cobbles and Boulders
10'	S-3	10.0'-11.5'	42	43	37	1.1			Brown Fine-Coarse Sand. Cobbles and Boulders.
15'	S-4	15.0'-16.5'	11	11	13	1.2			Brown Fine-Coarse Sand. Trace Silt
20'	S-5	20.0'-21.5'	21	42	37	1.2			Same as above.
25'	S-6	25.0'-26.5'	52	55	48	1.5		26.0'	Brown Fine-Medium Sand
									Fine-Coarse Sand. Fine-Coarse Grav
30'	S-7	30.0'-30.8'	76	100	3	0.8			Brown Fine-Medium Sand. Medium-C. Gravel.
35'	S-8	35.0'-36.5'	63	71	68	1.4		36.5'	Called Hole
									1½ Hr. Steam Cleaning

SAMPLE IDENTIFICATION

S — SPLIT SPOON
T — THIN WALL TUBE
U — UNDISTURBED PISTON
O — OPEN END ROD
W — WASH SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler
Consistency Density

0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	Stiff
30-49	Dense	9-15	Very Stiff
50+	Very Dense	16-30	Hard
		31+	Very Hard

PROPORTIONS USED

WATER 0 to 10%
SILT 10 to 20%
CLAY 20 to 35%
SAND 35 to 50%

REMARKS: Water @ 13.0

COL. A _____

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Trumbull, CT*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW 320*Date of completion: *7.22.86*

DEP/WPC I.D. No:

*Tuesday*Monitoring Point Location (relative to site features): *NW Corner; Adjacent to Branch Brook*Drilling Contractor: *Glenn Drilling, Inc.*

Supervising Engineer/Geologist:

Rick Christiana

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*337.24 ft.*Well depth below ground surface: *39*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

338.43 ft.

Screened interval:

*39.5 ft to 24.5 ft*Length of Screen: *15.0 ft*Length of riser pipe: *26.0 ft*Screen type: *5/8" HD PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

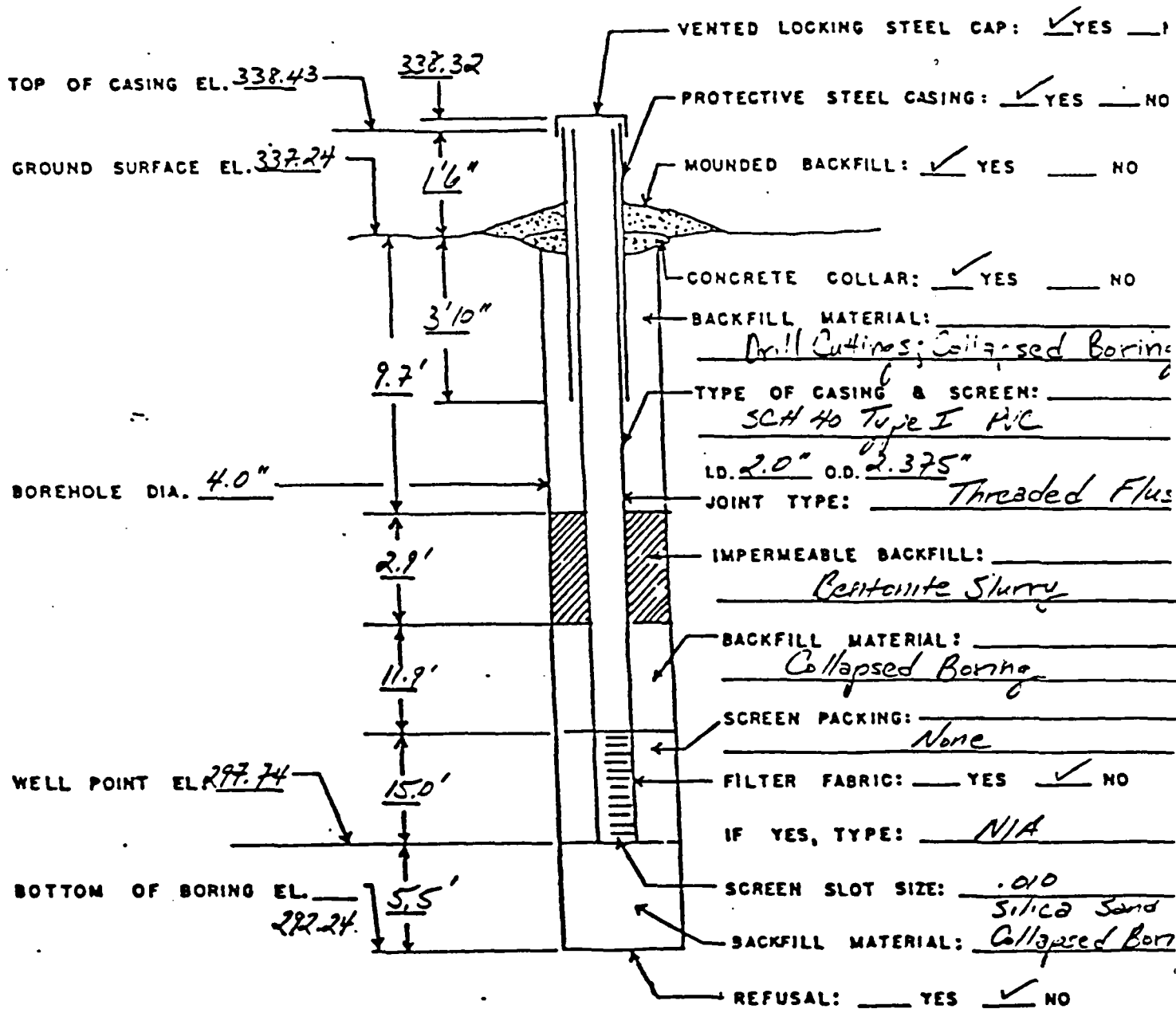
*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite 5%*Estimated K screened interval: *10⁻³*Time spent developing: *35 min.*Impermeable backfill: *Concrete Col.*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified drift*Inferred relationship to plume: ☐ Within ☐ Outside *NW* EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 320



Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203) 887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite
 LOCATION Thomaston, CT

BORING
 NUMBER
 32S

SHEET

No. 1
 of 1

DRILLER Roy Glenn

ARCHITECT
 ENGINEER

FILE NO. _____

INSPECTOR Rick

Casing Sampler Core Barrel

SURFACE ELEV. _____

DATE START _____

TYPE _____

SIZE I.D. _____

LINE & STATION _____

DATE FINISH _____

HAMMER WT. _____

HAMMER FALL _____

OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS	
	NO.	DEPTH	RANGE	BLOWS PER 6" ON SAMPLER						REC.
				0-6	6-12	12-18				
									Same as 32D: End of Boring: 24.5' Installed 2" PVC MOnitor Well Bottom set at 24.0' 10.0' Screen; 15.5' Riser 1 Protective Casing with Lock 3/4 Hr. Steam Cleaning	

SAMPLE IDENTIFICATION

S — SPLIT SPOON
 U — THIN WALL TUBE
 O — UNDISTURBED PISTON
 W — OPEN END ROD
 A — WASH SAMPLE
 A — AUGER SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler
 Consistency Density Cohesive Consistency

0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	Med. Stiff
30-49	Dense	9-15	Stiff
50 +	Very Dense	16-30	Very Stiff
		31 +	Hard

PROPORTIONS USED

Wash 0 to 10%
 Mts 10 to 20%
 same 20 to 35%
 and 35 to 50%

REMARKS:

COL. A _____

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Theriot, CT*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW 325*Date of completion: *7.31.86*

DEP/WPC I.D. No:

*Thursday*Monitoring Point Location (relative to site features): *NW Corner; Adjacent to Branch Brook*Drilling Contractor: *Glenn Crillins, Inc.*

Supervising Engineer/Geologist:

Rick Christians

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*337.54 ft*Well depth below ground surface: *2'*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

338.45 ft

Screened interval:

*24.0 ft to 14.0 ft*Length of Screen: *10.0 ft*Length of riser pipe: *15 ft 4 in*Screen type: *Sloped PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in.*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH. 40 Type I PVC

Method of well development:

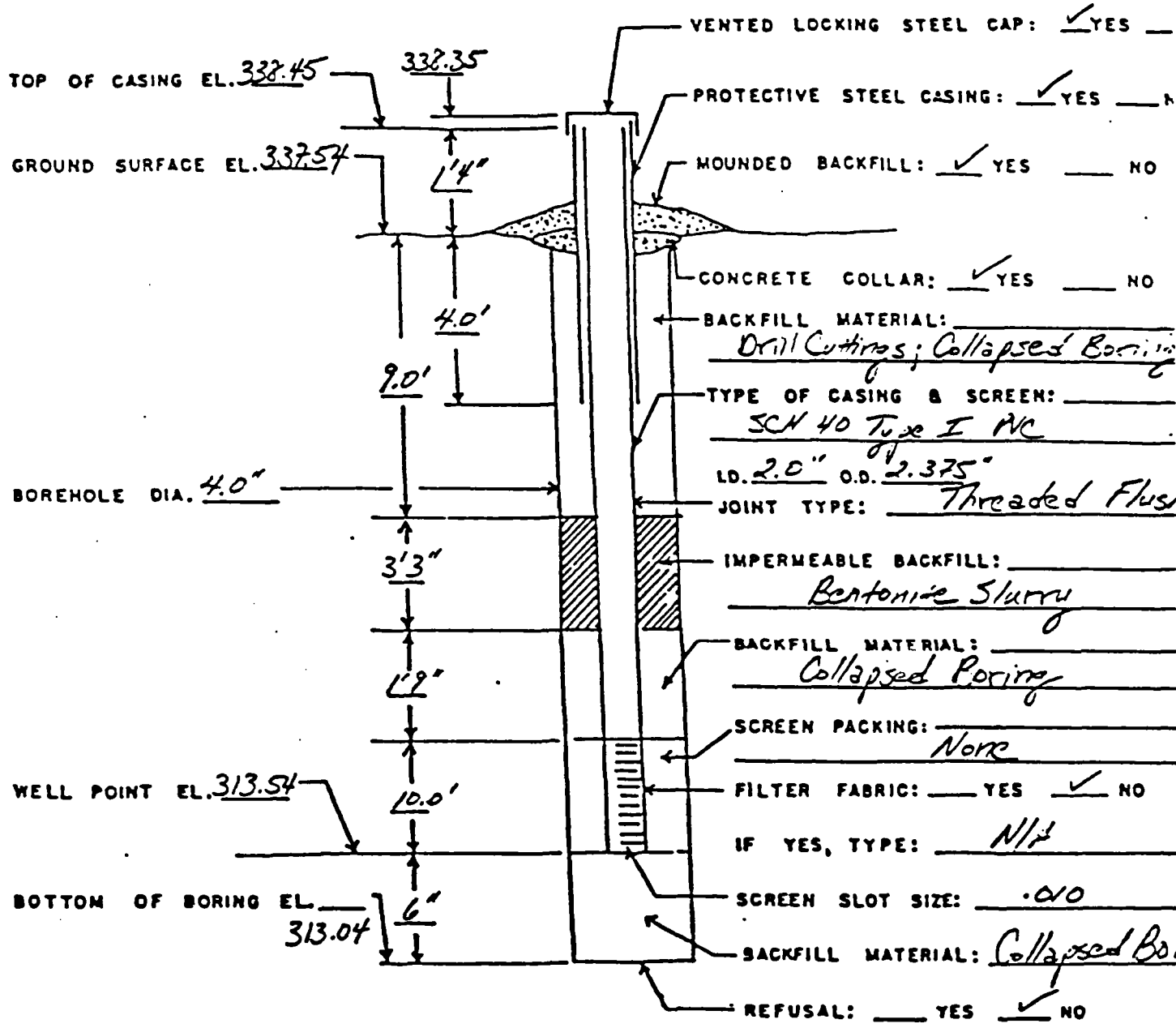
*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slur*Estimated K screened interval: *10'*Time spent developing: *One hour*Impermeable backfill: *Concrete Co.*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *stratified Drift*Inferred relationship to plume: ☐ Within ☐ Outside *NW* EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 325



CLARENCE WELTI ASSOC., INC.
P.O. BOX 397
GLASTONBURY, CONN. 06033

"BORING LOG"

Liquicon
PROJ. Thomaston, CT.
CLIENT. FUSS & O'NEILL

BORING NO. W-33

LINE & STA. _____

OFFSET _____

GR. ELEV. _____

BORING NO. W-34

LINE & STA. _____

OFFSET _____

GR. ELEV. _____

A STRATUM DESCRIPTION BLOWS
PER _____ B

	dumped ledge, some fine-crs. sand & gravel, fill		
14.0			
	crs. fine sand, gr/br. fine sand, little silt, gr/br. fine-crs. sand, tr. fine gravel & rock frags. in layers		
26.5			
	BOTTOM OF BORING 26.5 WATER AT 13.4 @ 0 hrs.		
	WELL @ 25.0'		
	<u>Materials</u>		
	10' screen (wrapped)		
	17' riser		
	1 - 5' protector pipe w/lock		
	Bentonite seal @ 13'		
	DATE: 3/2/81		
	DRILLER: BARACCO		

A STRATUM DESCRIPTION BLOWS
PER _____

	gr. dumped ledge, some fine-crs. sand & gravel, fill		
8.0			
	gr/br. med-crs. sand, some fine-crs. gravel cobbles & small boulders		
12.0			
	blk. & br. fine-crs. sand & gravel, cobbles & small boulders		
20.0			
21.7	br. fine-med. sand		
	cored: gr. soft solid gneiss rock		
	RUN #1 rec. 62"		
29.7			
	BOTTOM OF BORING 29.7' WATER AT 13' @ 0 hrs.		
	WELL @ 21.5'		
	<u>Materials</u>		
	5' screen (wrapped)		
	19.5' riser		
	1 - 5' protector pipe w/lock		
	NOTE: 1 bag cement & 1/2 bag VO. USED ON JOB		

1. COL. A strata depth
2. COL. B
3. HAMMER = 140v; FALL 30"

AND - 40 to 50%

NEW ENGLAND BORING CONTRACTORS, INC. P. O. Box 583 1387 Main Street Glastonbury, CT 06033 Springfield, MA 01103 203 - 633-8158 413 - 733-1232	CLIENT <u>Fuss & O'Neill</u> PROJECT NAME <u>Liguakon</u> LOCATION <u>Thomaston, CT</u>	BORING NUMBER B-36 SHEET No. <u>1</u> of <u>1</u>
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MILLER <u>T. Carpenter</u> INSPECTOR <u>C. Cvr</u> DATE START <u>10/1/82</u> DATE FINISH <u>10/1/82</u>	ARCHITECT ENGINEER TYPE <u>HSA</u> Casing <u>SS</u> Sampler <u>SS</u> Core Barrel SIZE I.D. <u>2-1/2"</u> <u>1-3/8"</u> HAMMER WT. <u>140</u> HAMMER FALL <u>30"</u>	FILE NO. _____ SURFACE ELEV. _____ LINE & STATION _____ OFFSET _____
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DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
5'	S1	5.0-6.5	6	7	8	14"		7.0	Br. Fine-Med. Sand, Tr. Silt, Occasional Cobbles
10'	S2	10.0-11.5	9	8	13	12"			
15'	S3	15.0-16.5	3	5	7	16"			
20'	S4	20.0-21.5	10	9	12	8"			Br. Fine Sand, Tr. Silt
25'	S5	25.0-26.5	6	6	9	12"			
30'	S6	30.0-31.5	18	14	22	16"		31.5	
									Bottom of Boring 31.5 Water @ 4.0
									Installed 22.5' of 1 1/2" PVC and 10. of 1 1/2" Screen, 1 Protector Pipe, 1 Lock

SAMPLE IDENTIFICATION S — SPLIT SPOON T — THIN WALL TUBE U — UNDISTURBED PISTON O — OPEN END ROD W — WASH SAMPLE A — AUGER SAMPLE	PENETRATION RESISTANCE 140 lb. Wt. falling 30" on 2" O.D. Sampler <table style="width:100%;"> <tr> <th colspan="2">Cohesionless Density</th> <th colspan="2">Cohesive Consistency</th> </tr> <tr> <td>0-4</td> <td>Very Loose</td> <td>0-2</td> <td>Very Soft</td> </tr> <tr> <td>5-9</td> <td>Loose</td> <td>3-8</td> <td>Soft</td> </tr> <tr> <td>10-29</td> <td>Med. Dense</td> <td>9-15</td> <td>M/Stiff</td> </tr> <tr> <td>30-49</td> <td>Dense</td> <td>16-30</td> <td>Stiff</td> </tr> <tr> <td>50 +</td> <td>Very Dense</td> <td>31 +</td> <td>V-Stiff Hard</td> </tr> </table>	Cohesionless Density		Cohesive Consistency		0-4	Very Loose	0-2	Very Soft	5-9	Loose	3-8	Soft	10-29	Med. Dense	9-15	M/Stiff	30-49	Dense	16-30	Stiff	50 +	Very Dense	31 +	V-Stiff Hard	PROPORTIONS USED trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	REMARKS: COL. A _____
Cohesionless Density		Cohesive Consistency																									
0-4	Very Loose	0-2	Very Soft																								
5-9	Loose	3-8	Soft																								
10-29	Med. Dense	9-15	M/Stiff																								
30-49	Dense	16-30	Stiff																								
50 +	Very Dense	31 +	V-Stiff Hard																								

GZA GEOENVIRONMENTAL, INC.
 Consulting Engineers/Geologists/Environmental Scientists

 27 Naek Road
 Vernon, Connecticut 06066
 (203) 875-7655

ENVIRITE
 THOMASTON, CONNECTICUT

Boring No. MW-37D
 Page 1 of 1
 File No. 41182
 Chkd. By: JTG

Boring Co. **GZA GEOENVIRONMENTAL, INC**

Foreman Ron Holman

 GZA
 GeoEnvironmental
 Rep. Al Augustine

 Date Start 5/4/94 End 5/4/94

 Location _____
 GS.Elev. _____ Datum _____

Type HSA
 I.D./O.D. 4"
 Hammer Wt. _____
 Hammer Fall _____
 Other _____

Sampler S.S.
 2" O.D. _____
 140 LB. _____
 30" _____

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
							See the Boring Log for MW-37B for sample depths and stratum descriptions			Grout 0'-22' 2" PVC riser +3'-27' Bentonite seal 22'-25' Sand 25'-32' 2" PVC screen 27'-32'
R M K										

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-37D

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Vernon, Connecticut 06066
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. MW-37B

Page 1 of 3

File No. 41182

Chkd. By: JTG

Boring Co. GZA GEOENVIRONMENTAL, INC

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Al Augustine

Date Start 4/26/94 End 5/4/94

Location See Plan

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	6" - 4"	2" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other	NQ Core	

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time

D P T H	Sample Information						Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
	No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Core time (min/ft)	RQD					
5	S-1	24/12	0-2	2-4			Medium dense, brown, fine to medium SAND, little Silt, trace Organic	FINE TO COARSE SAND AND BOULDERS	1.		Grout 0'-48'
				10-22							
10	S-2	3/3	5-5.2	100/3			Very dense, black-grey, fine to coarse SAND and GRAVEL, trace Silt	9.0'			2" PVC riser 0'-55.7'
15	S-3	24/8	10-12	56-52			Very dense, brown, fine to coarse SAND and GRAVEL, trace Silt		2.		
				30-17							
20	S-4	24/6	15-17	65-65			Very dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	FINE TO COARSE SAND AND GRAVEL			
				21-15							
25	S-5	24/1	20-22	76-62			Very dense, brown-grey, fine to coarse SAND, little fine Gravel, trace Silt				
				15-15							
	S-6	24/10	22-24	20-18							
				17-24							
	S-7	24/9	24-26	35-23							
				14-16			Dense, brown, fine to coarse SAND, little fine Gravel, trace Silt				
	S-8	24/6	26-28	12-15							
				12-15							
	S-9	24/8	28-30	20-18							
				15-21							

- Remarks
1. Auger refusal at 3.0 feet; 6" casing driven to 3.0' 4".
 2. Pull spin shoe and drive casing to completion.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-37B

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. MW-37B

Page 2 of 3

File No. 41182

Chkd. By: JTG

Boring Co. GZA GEOENVIRONMENTAL, INC

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Al Augustine

Date Start 4/26/94 End 5/4/94

Location See Plan

GS.Elev. Datum

Casing HSA S.S.
I.D./O.D. 6"- 4" 2" O.D.
Hammer Wt. 140 LB.
Hammer Fall 30"
Other NQ Core

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	Sample Information						Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
	No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Core time (min/ft)	RQD					
35	S-10	24/8	30-32	18-18			Dense, brown, fine to coarse SAND, little fine Gravel, trace Silt	FINE TO COARSE SAND AND GRAVEL			
				15-15							
	S-11	24/11	32-34	8-14			Dense, brown, fine to coarse SAND little Gravel, trace Silt	34' +/-			
40				16-17							
	S-12	24/2	34-36	19-21			Dense, brown, fine to medium SAND, trace Silt				
				18-16							
45	S-13	24/4	36-38	17-13			Medium dense, brown, fine to medium SAND, trace Silt	FINE TO MEDIUM SAND			
				12-13							
	S-14	24/5	38-40	8-14			Dense, brown, fine to medium SAND, trace Silt	40.0'			
50				1617							
	S-15	24/8	40-41.9	16-40			Very dense, brown-grey, fine to medium SAND, some Silt, little fine Gravel (weathered rock fragments)				
				52/100/4"							
55	S-16	24/3	42-42.5	100/5"			Very dense, brown-grey, fine to medium SAND, some Silt, little fine Gravel (weathered rock fragments)				
	S-17	24/6	44-46	51-49			Very dense, brown-grey, fine to medium SAND, some Silt, little fine Gravel (weathered rock fragments)	WEATHERED ROCK			
60				44-42							
	S-18	24/4	46-48	25-31			Very dense, grey-brown, fine to coarse GRAVEL				
				22-22							
65	S-19	11/4"	48-48.9	35-							
				100/5"							
	C-1	44/42	50-50.3		6:15	23	C-1 and C-2: White, grey, black, fresh to slightly weathered, very hard, very closely to medium fractured, very intensely banded, strongly foliated, medium- to coarse-grained biotite-quartz gneiss (foliation dips 60 degrees from vertical; 30 degrees from horizontal)		3.		
70					6:42						
					6:00						
	C-2	60/56	53.7-		2:40	48			4.		
75			58.7		3:35				6.		
					4:50				5.		
					2:00						
80					2:50						
	C-3	60/60	58.7-		5:10	87	C-3: Dark-grey, grey, fresh, very hard, medium fractured, very intensely banded, strongly foliated, medium-grained hornblende-biotite-feldspar-quartz gneiss (foliation dips 75 degrees from vertical; 15 degrees from horizontal; fractures parallel foliation)	58.0'			
			63.7		7:00			BLACK GNEISS 59.5'			

- Remarks
3. Casing refusal at 50.0 feet.
 4. New core bit.
 5. Sand in frac. 56-57.
 6. Hole opened up after core to 3 7/8 to 54' for chip placement.
 7. 10 foot, 2" screen 65.7 to 55.7. Sand 65.7 to 53.0. Chips 53 to 48. Grout to surface.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. 37B

Chkd. By: JTG

Boring No. MW-37B

FUSS & O'NEILL, INC.
MANCHESTER, CT 06040
CONSULTING ENGINEERS

PROJECT/LOCATION

Erwrite

BORING NO. MW-41B

SHEET 1 OF

JOB. NO. 88-461

LING CO. Welter

MILLER Joe

FUSS & O'NEILL REPRESENTATIVE J. Saxton

BORING LOCATION

GROUND ELEVATION

DATE STARTED 12/27/89 DATE FINISHED

DRILLING METHOD HSA

SAMPLING METHOD Core

HAMMER WT. 140

HAMMER FALL (IN) 30'

WATER LEVEL MEASUREMENTS

DATE

MS. PT.

WATER AT

HR AFTER COMPLETION

DEPTH (ft.)	CASING blowft	SAMPLE			SAMPLE DESCRIPTION	STRATA CHANGE/ GEN. DESCRIP.	WELL CONST. DETAILS	FIELD TESTING	REMARKS
		NO.	DEPTH (ft.)	PEN REC.	BLOWS/ 6"				
5					Loam, Sandy black				
			5-6.5	18/12	4/7/17				
10					Sandy, medium to coarse, trace pebbles, brown	7.0			
						9.0			
			10-N.5	6/4	59	Gravel, medium sand to 5" cobbles, brown, matrix supported, saturated			
15									
			15-16.5	18/12	44/51/44	Gravel and sand, coarse, pebble; blackish-brown			
20									
			20-21.5	18/14	55/51/31	Same as above, lost bottom of sample	21.0		
25									
			25-26.5	18/18	27/41/46	Sand, coarse to very coarse, reddish brown			
30									
			30-31.5	18/	19/22/25	Sand, medium to coarse, brown, trace pebbles			

PROPORTIONS USED

TRACE 0 TO 10%
 LITTLE 10 TO 20%
 SOME 20 TO 35%
 AND 35 TO 50%

BORING METHOD

DEPTH

REMARKS:



BORING NO.

FUSS & O'NEILL, INC. MANCHESTER, CT 06040 CONSULTING ENGINEERS				PROJECT/LOCATION		BORING NO. <u>MW-41B</u>			
				Ervirite Corporation		SHEET <u>2</u> OF <u>2</u>			
				Thomaston, Connecticut		JOB. NO. <u>88-261</u>			
DRILLING CO. <u>Walti</u> DRILLER <u>Joe Faulkner</u> FUSS & O'NEILL REPRESENTATIVE <u>J. Saxton</u>				BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>12/27/81</u> DATE FINISHED <u>1/3/90</u>					
DRILLING METHOD _____ SAMPLING METHOD _____ HAMMER WT. _____ HAMMER FALL (IN) _____				WATER LEVEL MEASUREMENTS					
				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION		
DEPTH (ft.)	CASING blow/ft	SAMPLE			SAMPLE DESCRIPTION	STRATA CHANGE/ GEN. DESCRIP.	WELL CONST. DETAILS	FIELD TESTING	REMARKS
		NO.	DEPTH (ft.)	PEN REC.					
35			35-36.5	18/18	12.23.19	Gravel, med. sand to pebble, reddish brown	Grout		
					60/59	Core of bedrock Gneiss, several bands of mica 1/2" thick, white foliation @15° angle to core			
40									
					48/48				
45									
					60/60				
50									
					60/60		Screen interval		
55									

PROPORTIONS USED		BORING METHOD	DEPTH	REMARKS:
TRACE	0 TO 10%	Hammer 4" casing	0-36'	
LITTLE	10 TO 20%	3" diam bit core	36-55'	
SOME	20 TO 35%			
AND	35 TO 50%			

10' screen
47' riser
depth @ 55'
sand to 37.5'
bentonite pellets 36-37.5'
grout to 2'
cement 0-2'

BORING NO.
MW-41B

Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203) 887-3621

CLIENT Fuss & O'Neill

PROJECT NAME Envirite

LOCATION Thomaston, CT

BORING
 NUMBER
 41-D

SHEET

No. 1

of 1

DRILLER Steve Cohen

ARCHITECT
 ENGINEER

FILE NO. _____

INSPECTOR Rick

TYPE Comp 4 SS Core Barrel
 SIZE I.D. 4" 1 1/2"
 HAMMER WT. 140#
 HAMMER FALL 30"

SURFACE ELEV. _____

DATE START July 16, 1986

LINE & STATION _____

DATE FINISH July 21, 1986

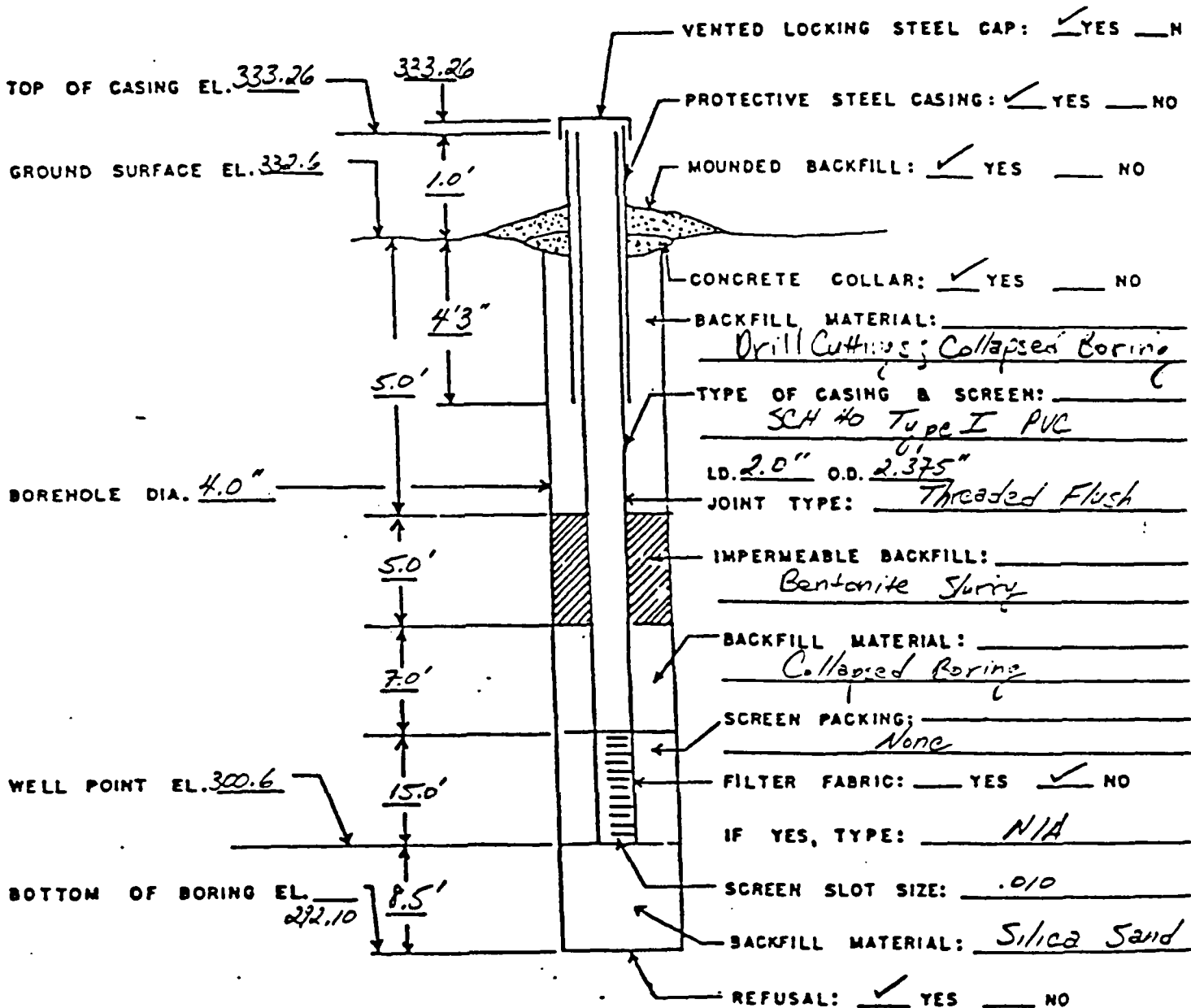
OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-1	14.5'-16.0'	10	9	14	0.8			Sand Fine-Coarse. Fine-Medium Gravel Trace Silt.
20	S-2	19.5'-21.0'	9	12	14	1.0			
25	S-3	24.5'-26.0'	1	3	2	0.9			Fine-Coarse Sand. Little Silt.
30	S-4	29.0'-30.5'	5	9	8	1.5	9	30.5'	Rock Gniess, Boulders
							28		
							29		
							31		35.5'
							40		
							55		
35	R-1	35.5'-40.5'				3.6	7		Bedrock Gneiss
							5		
							5		
							10		40.5'
							9		
40									
									End of Boring: 40.5'
									Installed PVC Monitor Well Bottom set at 34.0' 15.0' Screen; 20.0' Riser 3/4 Hr. Steam Cleaning 1 Protective Casing with Lock
					</				

SAMPLE IDENTIFICATION		PENETRATION RESISTANCE 140 lb. Wt. falling 30" on 2" O.D. Sampler		PROPORTIONS USED		REMARKS:
		Cohesiveness Density	Cohesive Consistency			
S	SPLIT SPOON	0-4 Very Loose	0-2 Very Soft	None	0 to 10%	Water 0 Hr. @ 10.0'
T	THIN WALL TUBE	5-9 Loose	3-4 Soft	Little	10 to 20%	
U	UNDISTURBED PISTON	10-29 Med. Dense	5-8 M/Stiff	Some	20 to 35%	
O	OPEN END ROD	30-49 Dense	9-15 Stiff	and	35 to 50%	
W	WASH SAMPLE	50+ Very Dense	16-20 V-Stiff			
A	AUGER SAMPLE		31+ Marg			COL. A 30-35 Blows on Col 35-40 min. per Lin.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 410



MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW 410*Date of completion: *7.21.86*

DEP/WPC I.D. No:

*Monday*Monitoring Point Location (relative to site features): *SE Corner. Adjacent to*Drilling Contractor: *Glenn Drilling, Inc.**Water Treatment Plant*
Supervising Engineer/Geologist:
Rick Christiana

Well Construction Method:

*Hollow Stem Auger ; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*332.6 ft.*Well depth below ground surface: *32.0*Refusal: ☒ Yes ☐ No

Top of casing elevation (MSL):

*333.26 ft.*Length of Screen: *15.0 ft.*

Screened interval:

*32.0 ft. to 17.0 ft.*Length of riser pipe: *12.0 ft.*Screen type: *Slotted PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slurry*Estimated K screened interval: *10⁻³ c.*Time spent developing: *2 hrs. 30 min.*Impermeable backfill: *Concrete Cells*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040		PROJECT/LOCATION		BORING NO. <u>MW-42B</u> SHEET <u>1</u> OF <u>2</u> JOB. NO. <u>91-580</u>					
		Envirite Corp.							
		Thomaston, Connecticut							
DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>				BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>03/30/93</u> DATE FINISHED <u>04/05/93</u>					
DRILLING METHOD <u>Spin Casing / Roller Bit</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>				WATER LEVEL MEASUREMENTS					
				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION		
DEPTH (ft.) <small>CASING below ft</small>		SAMPLE				SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (ft.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"				
						0-15.5': BOULDERS. No samples. Penetrated with cable tool rig.			
14.0		S-1	15.5-	24/12	12 14	SAND, F-C; some F-C subrounded to subangular gravel; trace		0 ppm	14.0
16.0			17.5		11 11	to little silt; trace cobbles; dark yellowish brown to grayish brown.			16.0
18.0									18.0
20.0		S-2	20-22	24/12	11 25 32 22	SAND, F-M; some F-M subrounded to subangular gravel; little silt; weathered schist fragments in tip; olive gray.		0 ppm	20.0
22.0									22.0
24.0		S-3	25-27	24/11	10 13	SAND, F-M; trace to little F-M gravel; little silt; olive gray.		0 ppm	24.0
26.0					11 15				26.0
28.0									28.0
30.0		S-4	30-32	24/6	28 36 43 46	SAND, VC-M; little F; trace silt; little granules and F-M gravel; dark yellowish brown.		0 ppm	30.0
32.0									32.0
34.0		S-5	35-37	24/12	22 46	34-35': BOULDER. SAND, F-M; trace C; little F-M gravel; little silt; trace		0 ppm	34.0
36.0					23 15	decomposed schist fragments; grayish brown.			36.0
38.0									38.0
40.0		S-6	40-42	24/18	17 19 22 22	SAND, F; trace to little silt; micaceous; trace F-C subrounded gravel; dark yellowish brown.		0 ppm	40.0
PROPORTIONS USED		BORING METHOD		DEPTH		REMARKS: FIELD INSTRUMENT= OVM 580B 0.010" PVC Screen set 65 to 75 ft. Bentonite Chips 58 to 65 ft. Grout to 3 ft. Rock Seal at 64.8 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.			
TRACE 0 TO 10%		Driven Casing		0 - 15.5					
LITTLE 10 TO 20%		Spin Casing		0 - 59					
SOME 20 TO 35%		Roller Bit		59 - 60					
AND 35 TO 50%									
perfill\wellog04						BORING NO. MW-42B			

[illegible]

FUSS & O'NEILL, INC.
CONSULTING
ENGINEERS

PROJECT/LOCATION

BORING NO.: MW-42B

Envirote Corp.

SHEET 1 OF 1

Thomaston, Connecticut

JOB NO.: 91-580

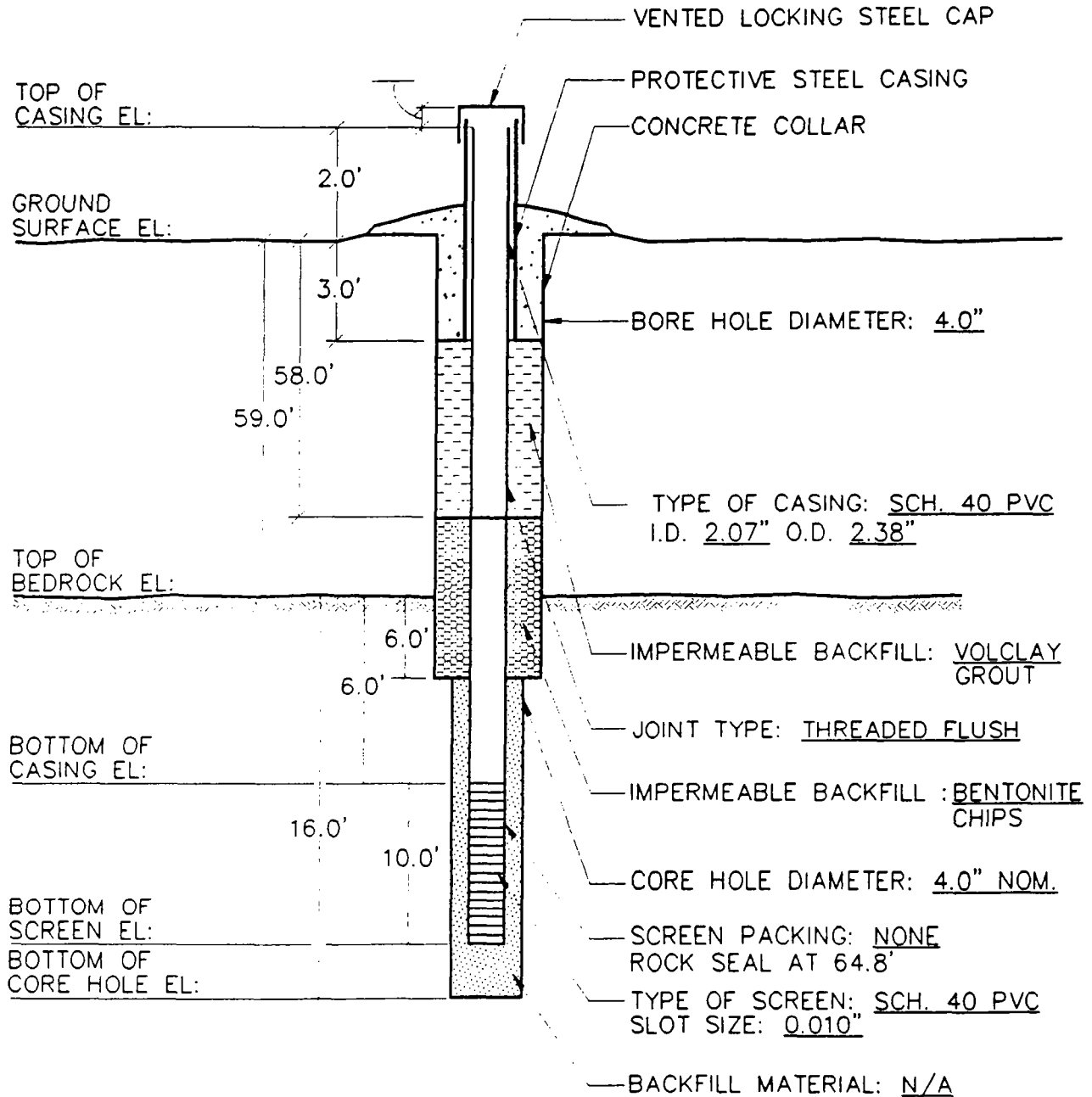
DEERES ROCK QUALITY DESIGNATIONS (RQD)

[illegible]

PERFILL\RODNEW

[illegible]

WELL NO. MW-42B



FUSS & O'NEILL
consulting engineers
144 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
(203) 648-2469

WELL CONSTRUCTION DETAILS
MW-42B

ENVIRITE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W42B.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-42B**

Date of Completion: **4/5/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Robert Kovach

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **75 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **65 to 75 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **67 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing:

Locking **X** or Threaded Cap

Impermeable Backfill:

Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **7.0, 8.0 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **58 to 65 ft.**

O-ring Seals: Yes: ☒ No:

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

Inferred Relationship to Plume; Within ☒ Outside Edge

Watershed (Plume Discharge Watercourse): **Branch Brook, Naugatuck River**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203) 887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite
 LOCATION Thomaston, CT

BORING
 NUMBER
42S

SHEET
 No. 1
 of 1

DRILLER Roy Glenn

ARCHITECT
 ENGINEER

FILE NO. _____

INSPECTOR Pick C.

TYPE _____
 SIZE I.D. 4"
 HAMMER WT. Air
 HAMMER FALL _____

Casing HW
 Sampler SS
 Core Barrel _____
1 1/2"
140#
30"

SURFACE ELEV. _____

DATE START August 11, 1986

LINE & STATION _____

DATE FINISH _____

OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-1	0-1.5'	13	30	17	1.0			Brown Fine-Medium Sand. Cobbles and Boulders. (FILL)
5'	S-2	5.0'-5.9'	10	25/.4		0.7			Blasted Rock
10'		No Sample							
								13.0'	
15'	S-3	15.0'-16.5'	13	10	14	0.8			Brown Fine-Coarse Sand and Gravel. (FILL)
								19.0'	
20'	S-4	20.0'-21.5'	5	7	10	1.4			Gray Fine Sand. Trace Silt.
								22.0'	
25'	S-5	25.0'-26.5'	14	18	20	1.1			Brown Fine-Coarse Sand. Some Fine-Medium Gravel.
30'	S-6	30.0'-31.5'	17	30	29	1.0			Same as above.
								33.0'	
									End of Boring: 33.0'
									Installed 2" PVC Monitor Well
									Bottom set at 32.5'
									10.0' Screen; 24.0' Riser
									1 Protective Casing with Lock
									3/4 Hr. Steam Clearing

SAMPLE IDENTIFICATION

S — SPLIT SPOON
 T — THIN WALL TUBE
 U — UNDISTURBED PISTON
 O — OPEN END ROD
 W — WASH SAMPLE
 A — AUGER SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler
 Consistency Density

0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50 +	Very Dense	16-30	V-Stiff
		31 +	Hard

PROPORTIONS USED

WATER 0 to 10%
 SILT 10 to 20%
 CLAY 20 to 35%
 SAND 35 to 60%

REMARKS:

Water @ 16.0' o Hr.

COL. A _____

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW #25*Date of completion: *8.11.86*

DEP/WPC I.D. No:

*Monday*Monitoring Point Location (relative to site features): *South End of Property;*Drilling Contractor: *Glen Drilling, Inc.* *Adjacent to Water Treatment Plant*

Supervising Engineer/Geologist:

Rick Christiano

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*338.22 ft.*Well depth below ground surface: *224*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

339.46 ft.

Screened interval:

Length of Screen: *10.0 ft.**32 ft. 8 in. to 22 ft. 8 in.*Length of riser pipe: *24 ft 6 in*Screen type: *5/16" PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

*SCH 40 Type I PVC*Impermeable Backfill: *Centarite Slu*

Method of well development:

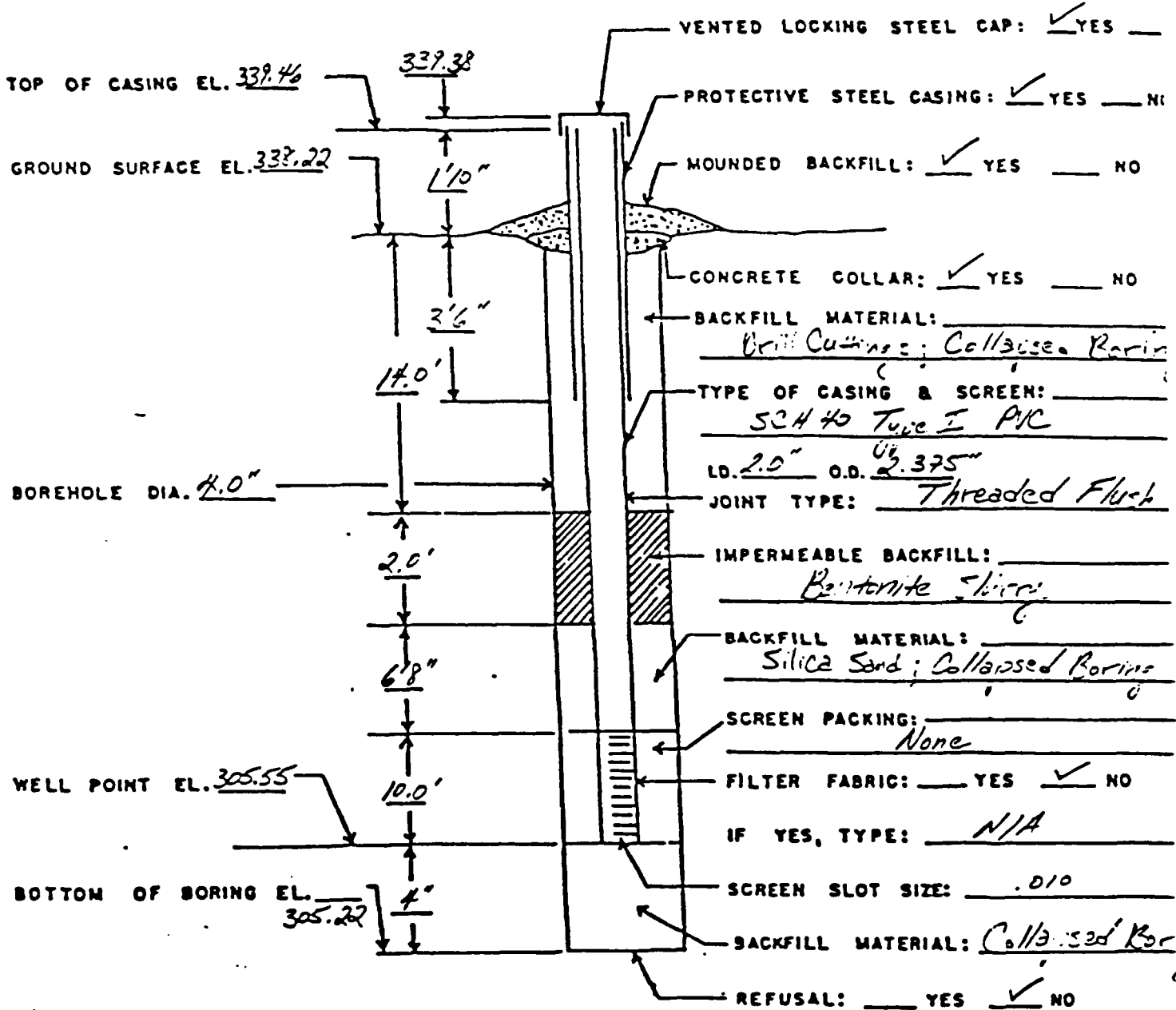
*Centrifugal Pump*Estimated K screened interval: *10-3*Locking ☒ or threaded cap ☐Time spent developing: *15 min*Impermeable backfill: *Concrete Co*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 425



Glenn Drilling Inc.

Scott Hill Road
Colchester, Ct 06415
(203) 887-3621

CLIENT Fuss & O'NeillPROJECT NAME EnviriteLOCATION Thomaston, CTBORING
NUMBER
43DSHEET
1
of 2DRILLER Roy GlennARCHITECT
ENGINEERINSPECTOR RickDATE START August 6, 1986

DATE FINISH _____

TYPE	Casing IN	Sampler SS	Core Barrel
SIZE I.D.	<u>4"</u>	<u>1-1/2"</u>	
HAMMER WT.		<u>140#</u>	
HAMMER FALL		<u>30"</u>	

FILE NO. _____

SURFACE ELEV. _____

LINE & STATION _____

OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-1	0-1.5'	9	29	21	0.9			(FILL) cobbles and Boulders and Fine-Medium Sand
5'		5.0'-	30.0						
10'	S-2	10.0'-11.5'	12	20	11	1.4		10.5'	Black Organic Silt and Fine Sand
								12.0'	Brown Fine-Coarse Sand. Some Fine-Medium Gravel.
15'	S-3	15.0'-16.5'	37	17	10	0.9			
20'	S-4	20.0'-21.5'	21	20	12	1.0			
25'	S-5	25.0'-26.5'	16	17	16	1.0			
30'	S-6	30.0'-31.5'	23	49	71	1.4			
35'	S-7	35.0'-36.5'	14	12	10	1.2			

SAMPLE IDENTIFICATION

S — SPLIT SPOON
T — THIN WALL TUBE
U — UNDISTURBED PISTON
O — OPEN END ROD
W — WASH SAMPLE
A — AUGER SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler
Consistency Density

0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Stiff
30-49	Dense	9-15	Stiff
50+	Very Dense	16-30	V-Stiff
		31+	Hard

PROPORTIONS USED

WATER 0 to 10%
SILT 10 to 20%
CLAY 20 to 35%
and 35 to 50%

REMARKS:

Water @ 17.0'

COL. A _____

Glenn Drilling Inc.

Scott Hill Road
Colchester, Ct 06415
(203) 887-3621

CLIENT Fuss & O'NeillPROJECT NAME EnviriteLOCATION Thomaston, CTBORING
NUMBER
43D

SHEET

No. 2of 2DRILLER Roy GlennARCHITECT
ENGINEERINSPECTOR RickDATE START August 6, 1986

DATE FINISH _____

FILE NO. _____

SURFACE ELEV. _____

LINE & STATION _____

OFFSET _____

	Casing FW	Sampler SS	Core Barrel
TYPE			
SIZE I.D.	<u>4"</u>	<u>1 1/2"</u>	
HAMMER WT.	<u>Air</u>	<u>140#</u>	
HAMMER FALL		<u>30'</u>	

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-8	40.0'-41.5'	5	12	17	1.5			Brown Fine-Coarse Sand. Some Fine-Medium Gravel with Artesian Pressure. Flowing Sand.
45'		No Sample							
50'		No Sample							
55'		No Sample							
60'	S-9	60.0'-61.5'	1	2	4	1.0			Brown Fine-Coarse Sand. Some Fine-Coarse Gravel.
65'		No Sample							
								68.0'	Top of Rock
								68.5'	
									End of Boring: 68.5'
									Installed PVC Monitor Well
									Bottom set at 68.0'
									10.0' Screen; 60.0' Riser
									1 Protective Casing with Lock
									3/4 Hr. Steam Cleaning

SAMPLE IDENTIFICATION

S — SPLIT SPOON
T — THIN WALL TUBE
U — UNDISTURBED PISTON
O — OPEN END ROD
W — WASH SAMPLE
A — AUGER SAMPLE

PENETRATION RESISTANCE

140 lb. WL falling 30" on 2" O.D. Sampler

Consistency	Density	Consistency	Density
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-6	Soft
10-29	Med. Dense	7-15	Stiff
30-49	Dense	16-30	Very Stiff
50 -	Very Dense	31 -	Hard

PROPORTIONS USED

Grass 8 to 10%
Mile 10 to 20%
same 20 to 35%
and 35 to 50%

REMARKS:

COL. A _____

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Enviroc Corporation*Monitoring Point I.D. No.: *MW 430*Date of completion: *8.8.86*

DEP/WPC I.D. No:

*Friday*Monitoring Point Location (relative to site features): *South End of Property;**Adjacent to Water Treatment Plant*Drilling Contractor: *Gleim Drilling, Inc.*

Supervising Engineer/Geologist:

Rick Christa

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*339.1 ft.*Well depth below ground surface: *68.0*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

340.67 ft.

Screened interval:

*68.0 ft to 58.0 ft.*Length of Screen: *10.0 ft.*Length of riser pipe: *60.0 ft.*Screen type: *SloTTed PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

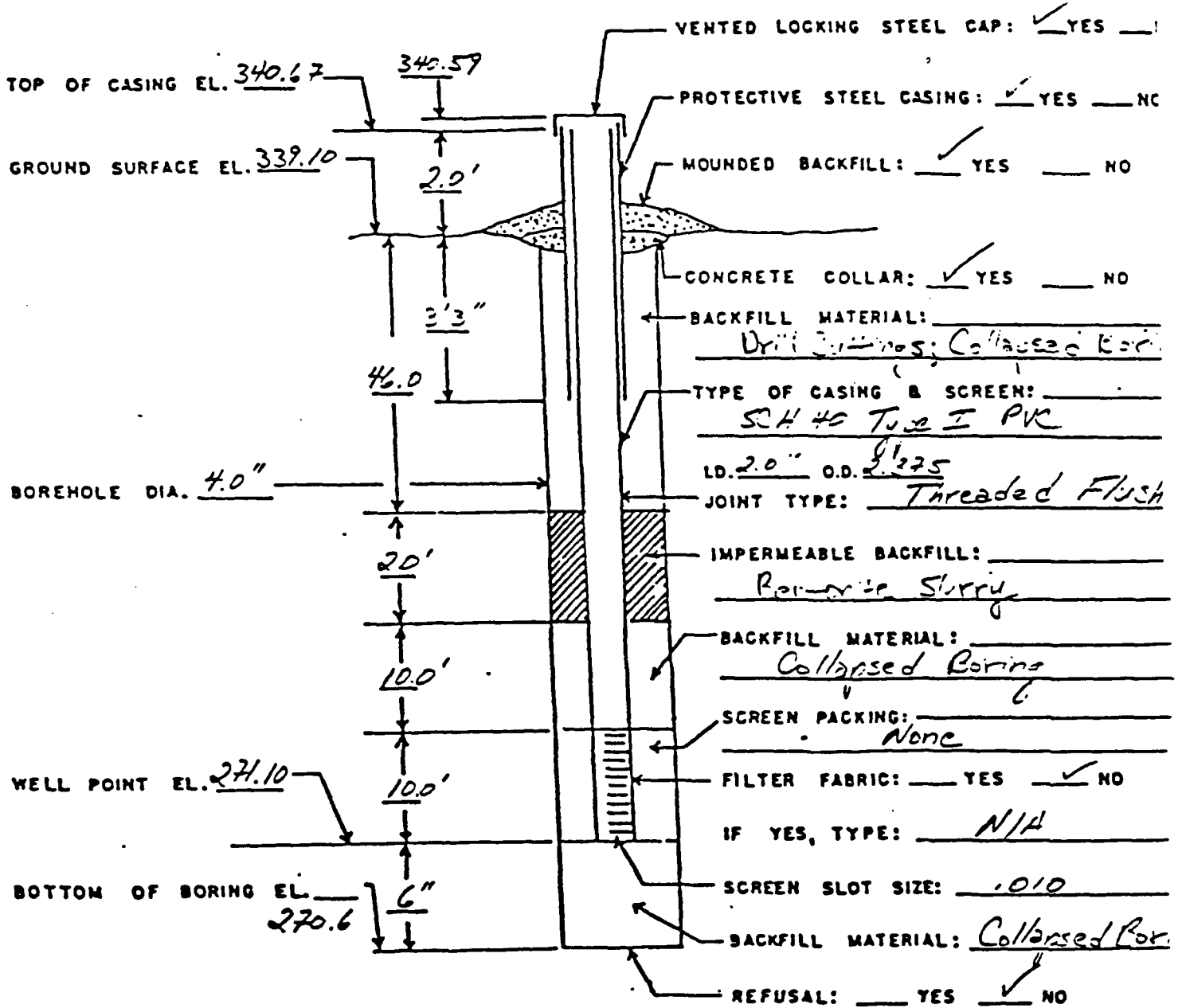
*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slur*Estimated K screened interval: *10⁻³ c*Time spent developing: *15 min*Impermeable backfill: *Concrete Coll*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River ; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

11W 430



Glenn Drilling Inc.Scott Hill Road
Colchester, Ct 06415
(203) 887-3621CLIENT Fuss & O'NeillPROJECT NAME EnviriteLOCATION Thomaston, CTBORING
NUMBER
43SSHEET
No. 1
of 1DRILLER Roy GlennARCHITECT
ENGINEER

FILE NO. _____

INSPECTOR Rick C.

TYPE

Casing

Sampler

Core Barrel

SURFACE ELEV. _____

DATE START August 8, 1986

SIZE I.D.

4"

LINE & STATION _____

DATE FINISH August 11, 1986

HAMMER WT.

Air

OFFSET _____

HAMMER FALL

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
									As per 43D No Samples 0-33.0' Drove 4" Casing Installed 2" PVC Monitor Well Bottom set at 32.5' 10.0' Screen; 24.0' Riser 1 Protective Casing with Lock 3/4 Hr. Steam Cleaning

SAMPLE IDENTIFICATION

S — SPLIT SPOON
T — THIN WALL TUBE
U — UNDISTURBED PISTON
O — OPEN END ROD
W — WASH SAMPLE
A — AUGER SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler

Consistency		Cohesive Consistency	
0-4	Very Loose	0-3	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	Stiff
30-49	Dense	9-15	Very Stiff
50+	Very Dense	16-30	Hard
		31+	Very Hard

PROPORTIONS USED

Gravel 0 to 10%
Sand 10 to 20%
Silt 20 to 35%
Clay 35 to 50%

REMARKS:

Water @ 17.0' 0 Hr.

COL. A _____

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Haugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Envirite Corporation*Monitoring Point I.D. No.: *MW 435*Date of completion: *8.11.86*

DEP/WPC I.D. No:

*Monday*Monitoring Point Location (relative to site features): *South End of Property;*Drilling Contractor: *Glen Drilling, Inc.**Adjacent to Water Treatment Plant*

Supervising Engineer/Geologist:

Lick Christiana

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*339.28 ft.*Well depth below ground surface: *32 ft.*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

Length of Screen: *10.0 ft. 340.42 ft.*

Screened interval:

*32 ft 4 in to 22 ft 4 in*Length of riser pipe: *23 ft. 11 in.*Screen type: *Slotted PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

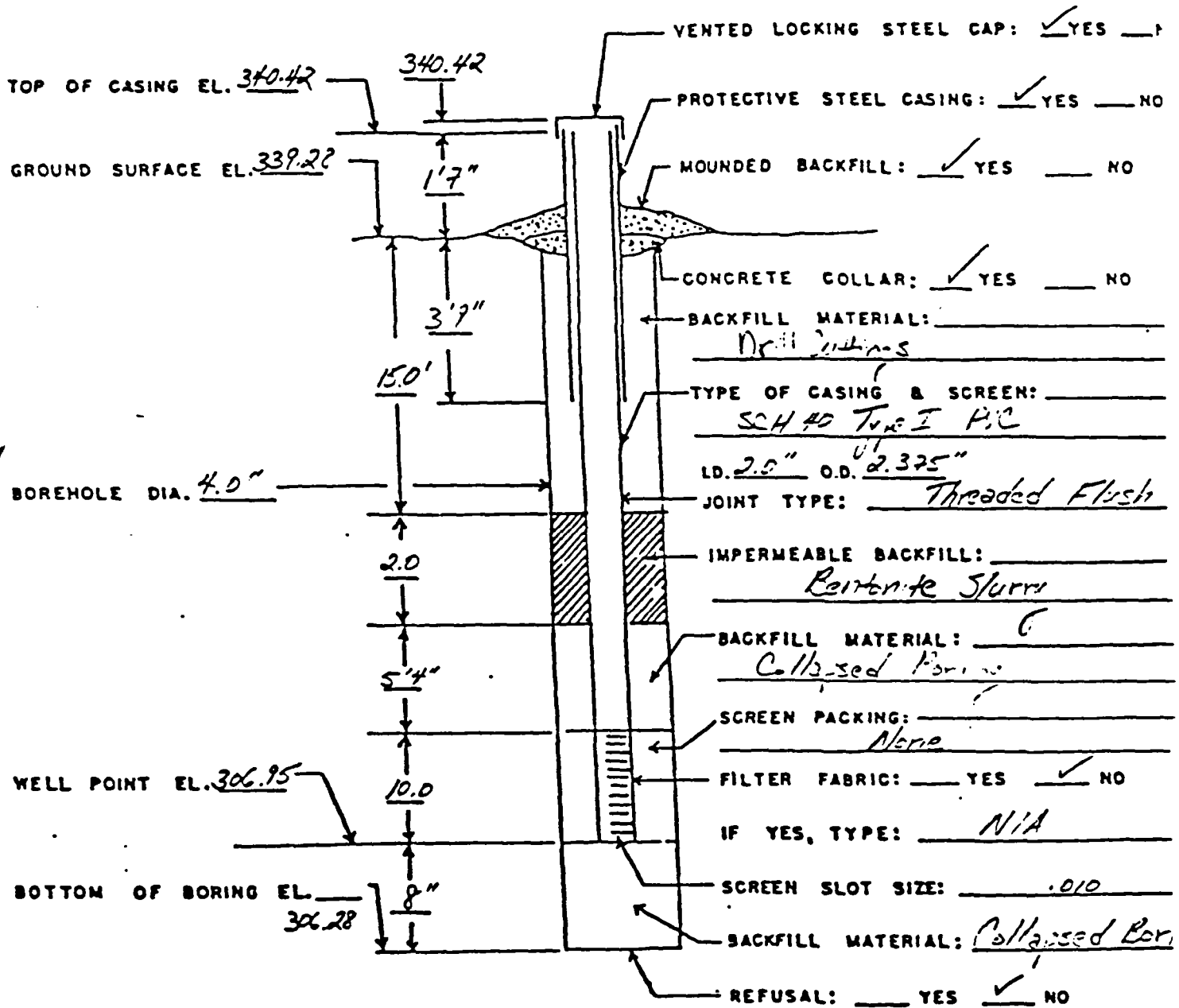
SCH 40 Type I PVC

Method of well development:

*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slurr*Estimated K screened interval: *10⁻³ cm*Time spent developing: *15 min*Impermeable backfill: *Concrete Col.*

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

hmc 435



SOIL SAMPLING LOG

SHEET 1 OF 1

CONNECTICUT TEST BORINGS, INC.

Sub-Surface Specialists

P O BOX 69

SEYMOUR, CONNECTICUT

(203) 888-3857

PROJ NO FAU 83-386

LOCATION Devirite Co.Thomaston, Conn.

OFFSET

GROUND ELEVATION

HOLE NO W-43

CASING SAMPLER CORE B

TYPE HSA BSSIZE ID 3" 1 3/8"

3-22-84

3-22-84

OF HAMMER 140 XXFALL 30 XXGROUND WATER OBSERVATIONS
DATE TIME DEPTH

22-84 0 hrs. 12'3"

D.R.O.D. 2" ID 3/8"

or Rig Hydraulic Rotary

ESPECIALLY COMPILED FOR

Fuss & O'Neill, Inc.210 Main StreetManchester, Conn, 06040

DEPTH BELOW SURFACE	SAMPLE NO DEPTH ELEV. FT	TYPE OF Sample	BLOWS PER FT ON SAMPLER			DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH ELEV	FIELD IDENTIFICATION OF SOILS REMARKS	SAMPLE	
			From	TO					NO.	PEN
			0-4	4-12	12-18					
								Large & small rock fragments, some br. sand. (fill)		
							7'			
	10' to 11'6"	SS	12	11	22	Dense damp	12'±	Br. & orange br. silty f-sand, lit. o-f gravel, tr. roots. (possible fill).	1	18
	15' to 16'6"	SS	8	4	5	Loose wet		Br. o-f sand, tr. f-gravel.	2	18
	20' to 21'6"	SS	3	4	4	Loose wet		Gryish br. m-f sand, lit. o-sand, tr. silt.	3	18
	25' to 26'6"	SS	6	8	17	h.Comp wet	26'6"	Gryish br. o-f sand, lit. f-grav., tr. silt.	4	18
								Bottom of boring 26'6".		
								NOTE: Installed 2" PVC water observation pipe w/10' screen 24'8" below grade, 2' above grade. A bentonite seal and a steel protective pipe were installed. Well was developed.		

Proportions used: sand = 6-10%, Silt = 10-20%, clay = 20-25%, and = 25-30%

TOTAL FOOTAGE

 DRILLER J.D.
 HELPER J.K.
 SOIL ENGINEER

 SAMPLE TYPE
 C = CORED W = WASHED
 SS = SPLIT SPOON
 UP = UNDISTURBED PISTON

 CONSISTENCY DENSITY
 0-10 LOOSE
 10-30 MED. COMP.
 30-50 DENSE

 Each Boring
 Each Core

NOT RESPONSIBLE FOR SAMPLE STORAGE AFTER 30 DAYS


FUSS & O'NEILL, INC. MANCHESTER, CT 06040 CONSULTING ENGINEERS	PROJECT/LOCATION		BORING NO. <u>MW-44B</u>
	Envirite Corporation		SHEET <u>1</u> OF <u>3</u>
	Thomaston, Connecticut		JOB. NO. <u>88-461</u>

DRILLING CO. <u>WELTI</u> DRILLER <u>Joe Faulkner</u> FUSS & O'NEILL REPRESENTATIVE <u>J. Saxton</u>	BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>1/4/90</u> DATE FINISHED <u>1/16/90</u>
--	--

DRILLING METHOD _____ SAMPLING METHOD _____ HAMMER WT. _____ HAMMER FALL (IN) _____	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4">WATER LEVEL MEASUREMENTS</th> </tr> <tr> <th style="width:25%;">DATE</th> <th style="width:25%;">MS. PT.</th> <th style="width:25%;">WATER AT</th> <th style="width:25%;">HR AFTER COMPLETION</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	WATER LEVEL MEASUREMENTS				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION								
WATER LEVEL MEASUREMENTS																	
DATE	MS. PT.	WATER AT	HR AFTER COMPLETION														

DEPTH (ft.)	CASING blow/ft	SAMPLE			SAMPLE DESCRIPTION	STRATA CHANGE/ GEN. DESCRIP.	WELL CONST. DETAILS	FIELD TESTING	REMARKS
		NO.	DEPTH (ft.)	PEN REC.					
5					Gravel, Boulder				
10									
15					Gravel and sand				
20									
25									
30									

PROPORTIONS USED TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50%	BORING METHOD Spun 4" Dia Casing Rotary Bit Bedrock Core (3')	DEPTH 0 - 74' 74-76' 76-90'	REMARKS:
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BORING NO.
 MW-44B


FUSS & O'NEILL, INC. MANCHESTER, CT 06040 CONSULTING ENGINEERS	PROJECT/LOCATION	BORING NO. <u>MW-44B</u>
	Envirite Corporation	SHEET <u>2</u> OF <u>3</u>
	Thomaston, Connecticut	JOB. NO. <u>88-461</u>

DRILLING CO. _____
 DRILLER _____
 FUSS & O'NEILL REPRESENTATIVE _____

BORING LOCATION _____
 GROUND ELEVATION _____
 DATE STARTED 1/4/90 DATE FINISHED 1/16/90

DRILLING METHOD _____ SAMPLING METHOD _____ HAMMER WT. _____ HAMMER FALL (IN) _____	WATER LEVEL MEASUREMENTS			
	DATE	MS. PT.	WATER AT	HR AFTER COMPLETION

[illegible]

PROPORTIONS USED		BORING METHOD	DEPTH	REMARKS:
TRACE	0 TO 10%			
LITTLE	10 TO 20%			
SOME	20 TO 35%			
AND	35 TO 50%			
				

BORING NO.

FUSS & O'NEILL, INC. MANCHESTER, CT 06040 CONSULTING ENGINEERS	PROJECT/LOCATION	BORING NO. <u>MW-44b</u>
	Envirite Corporation	SHEET <u>3</u> OF <u>3</u>
	Thomaston, Connecticut	JOB. NO. <u>88-461</u>

ILLING CO. <u>Walti</u> LLER <u>Joe Faulkner</u> FUSS & O'NEILL REPRESENTATIVE <u>J. Saxton</u>	BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>1/4/90</u> DATE FINISHED <u>1/16/90</u>
---	--

DRILLING METHOD <u>Spun Casing</u> SAMPLING METHOD <u>N/A (Core)</u> HAMMER WT. _____ HAMMER FALL (IN) _____	WATER LEVEL MEASUREMENTS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:15%;">DATE</th> <th style="width:15%;">MS. PT.</th> <th style="width:15%;">WATER AT</th> <th style="width:15%;">HR AFTER COMPLETION</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	DATE	MS. PT.	WATER AT	HR AFTER COMPLETION												
DATE	MS. PT.	WATER AT	HR AFTER COMPLETION														

DEPTH (ft.)	CASING blow/ft	NO.	SAMPLE			SAMPLE DESCRIPTION	STRATA CHANGE/ GEN. DESCRIP.	WELL CONST. DETAILS	FIELD TESTING	REMARKS
			DEPTH (ft.)	PEN REC.	BLOWS/ 6"					
75						Same as above/		Grout		
								Bentonite		
80						Gneiss; little schist, trace quart veins				
90						Bottom of boring				

PROPORTIONS USED RACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50%	BORING METHOD Spun 4" dia. casing 0-74' Rotary Bit 74-76' Bedrock Core 76-90'	DEPTH 0-74' 74-76' 76-90'	REMARKS: 10' screen 97.5' riser Depth @ 85' Sand to 75' Bentonite @ 75-73' Grout to 2' Cement 0-2'
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BORING NO.
 MW-44B



Glenn Drilling Inc.

Scott Hill Road
Colchester, Ct 06415
(203) 887-3621

CLIENT Fuss & O'NeillPROJECT NAME EnviriteLOCATION Thomaston, CTBORING
NUMBER
44D

SHEET

No. 1
of 2DRILLER Roy GlennARCHITECT
ENGINEER

FILE NO. _____

INSPECTOR Rick

TYPE

Casing

Sampler

Core Barrel

HW

SS

SIZE I.D.

4"

1 1/2"

HAMMER WT.

140#

HAMMER FALL

30"

SURFACE ELEV. _____

LINE & STATION _____

OFFSET _____

DATE FINISH _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
5	S-1	4.0'-5.5'	7	52	40	0.8			Boulder FILL
10									
15	S-2	14.0'-15.5'	7	8	9	1.5			Brown Fine Sand. Trace Mica and Silt.
					</				

SAMPLE IDENTIFICATION

S — SPLIT SPOON
T — THIN WALL TUBE
U — UNDISTURBED PISTON
O — OPEN END ROD
W — WASH SAMPLE
A — AUGER SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler
Cohesiveness Density Cohesive Consistency

0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	M/Silt
30-49	Dense	9-15	Stiff
50 +	Very Dense	16-30	V-Stiff
		31 +	Hard

PROPORTIONS USED

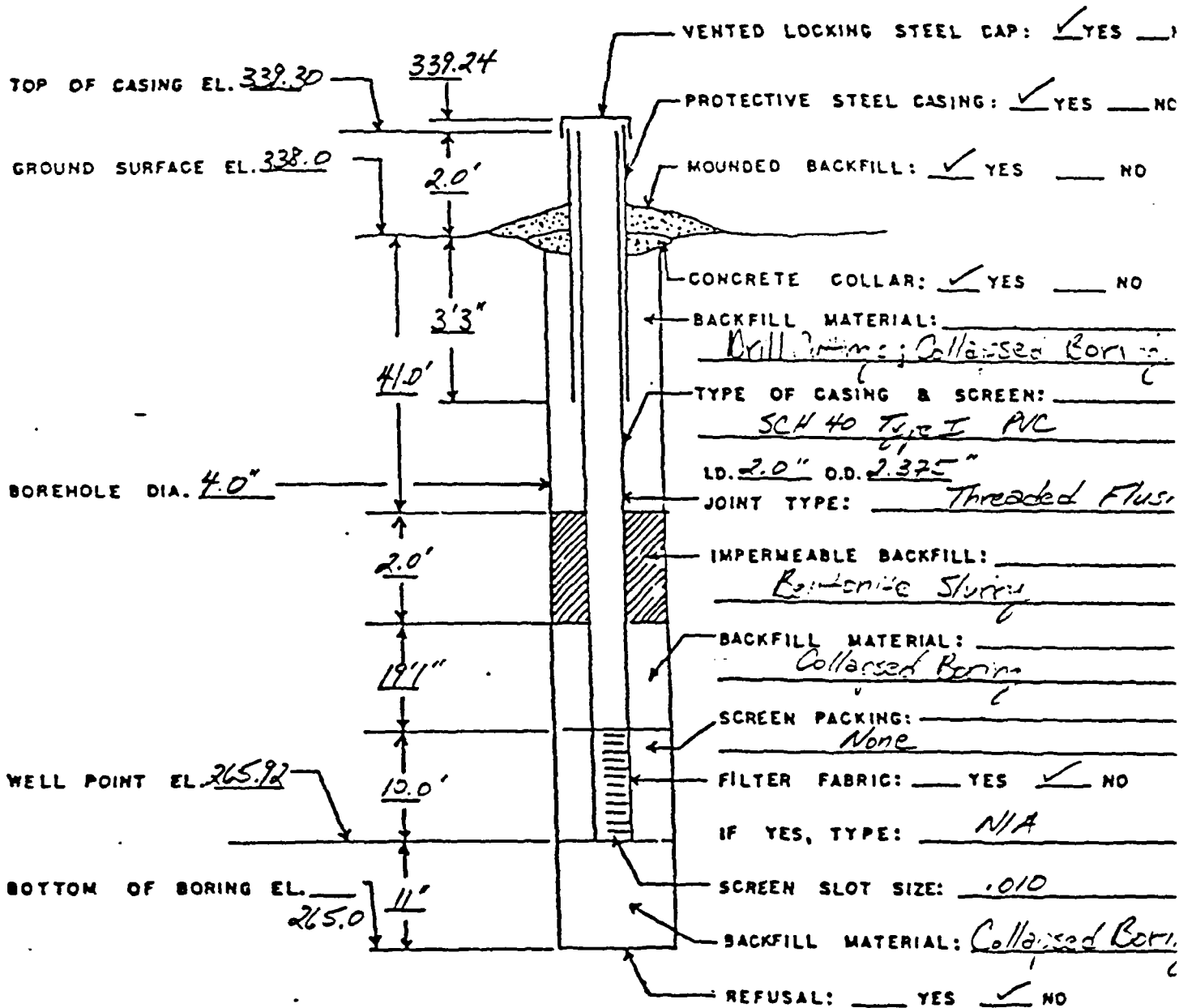
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 60%

REMARKS:

COL. A _____

Glenn Drilling Inc. Scott Hill Road Colchester, Ct 06415 (203)887-3621				CLIENT <u>Fuss & O'Neill</u> PROJECT NAME <u>Envirite</u> LOCATION <u>Thomaston, CT</u>		BORING NUMBER <u>44D</u> SHEET No. <u>2</u> of <u>2</u>																																																																																																																																																												
DRILLER <u>Roy Glenn</u> INSPECTOR <u>Rick Cristians</u> DATE START _____ DATE FINISH _____		ARCHITECT ENGINEER TYPE _____ SIZE I.D. _____ HAMMER WT. _____ HAMMER FALL _____				FILE NO. _____ SURFACE ELEV. _____ LINE & STATION _____ OFFSET _____																																																																																																																																																												
		TYPE _____ SIZE I.D. _____ HAMMER WT. _____ HAMMER FALL _____		Cores _____ HW _____ 4" _____ Sampler _____ SS _____ 1 1/2" _____ 140# _____ Core Barrel _____ 30" _____																																																																																																																																																														
<table border="1"> <thead> <tr> <th rowspan="3">DEPTH</th> <th colspan="6">SAMPLE</th> <th rowspan="3">COL. A</th> <th rowspan="3">STRATA CHANGE</th> <th rowspan="3">FIELD CLASSIFICATION AND REMARKS</th> </tr> <tr> <th rowspan="2">NO.</th> <th rowspan="2">DEPTH RANGE</th> <th colspan="3">BLOWS PER 6" ON SAMPLER</th> <th rowspan="2">REC.</th> </tr> <tr> <th>0-6</th> <th>6-12</th> <th>12-18</th> </tr> </thead> <tbody> <tr><td>45'</td><td>S-6</td><td>46.0'-47.5'</td><td>5</td><td>4</td><td>8</td><td>1.0</td><td></td><td></td><td rowspan="15">Brown Fine-Coarse Sand and Gravel.</td></tr> <tr><td>50'</td><td>S-7</td><td>50.0'-51.0'</td><td>30</td><td>30</td><td>45</td><td>1.5</td><td></td><td></td></tr> <tr><td>55'</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>60'</td><td>S-8</td><td>60.0'-61.5'</td><td>55</td><td>43</td><td>56</td><td>0.6</td><td></td><td></td></tr> <tr><td>65'</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>70'</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>72.0'</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>75'</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>								DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.	0-6	6-12	12-18	45'	S-6	46.0'-47.5'	5	4	8	1.0			Brown Fine-Coarse Sand and Gravel.	50'	S-7	50.0'-51.0'	30	30	45	1.5			55'									60'	S-8	60.0'-61.5'	55	43	56	0.6			65'									70'									72.0'									75'																																																																							
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MW 44C



MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thamaston, CT*Site: *Enviroite Corporation*Monitoring Point I.D. No.: *MW 440*Date of completion: *8.5.86*

DEP/WPC I.D. No:

*Tuesday*Monitoring Point Location (relative to site features): *SW Corner; Adjacent to Branch Brook*Drilling Contractor: *Gleim Drilling, Inc.* Supervising Engineer/Geologist:

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*332.0 ft.*Well depth below ground surface: *72 ft*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

339.30 ft.

Screened interval:

*72 ft 1 in to 62 ft 1 in*Length of Screen: *10.0 ft*Length of riser pipe: *64 ft 1 in*Screen type: *Slotted PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slurr*Estimated K screened interval: *10⁻³ cm*Time spent developing: *30 min*Impermeable backfill: *Concrete Collar*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

Glenn Drilling Inc. Scott Hill Road Colchester, Ct 06415 (203) 887-3621	CLIENT <u>Fuss & O'Neill</u>	BORING NUMBER 44S SHEET No. <u>1</u> of <u>1</u>
	PROJECT NAME <u>Envirite</u>	
	LOCATION <u>Thomaston, CT</u>	

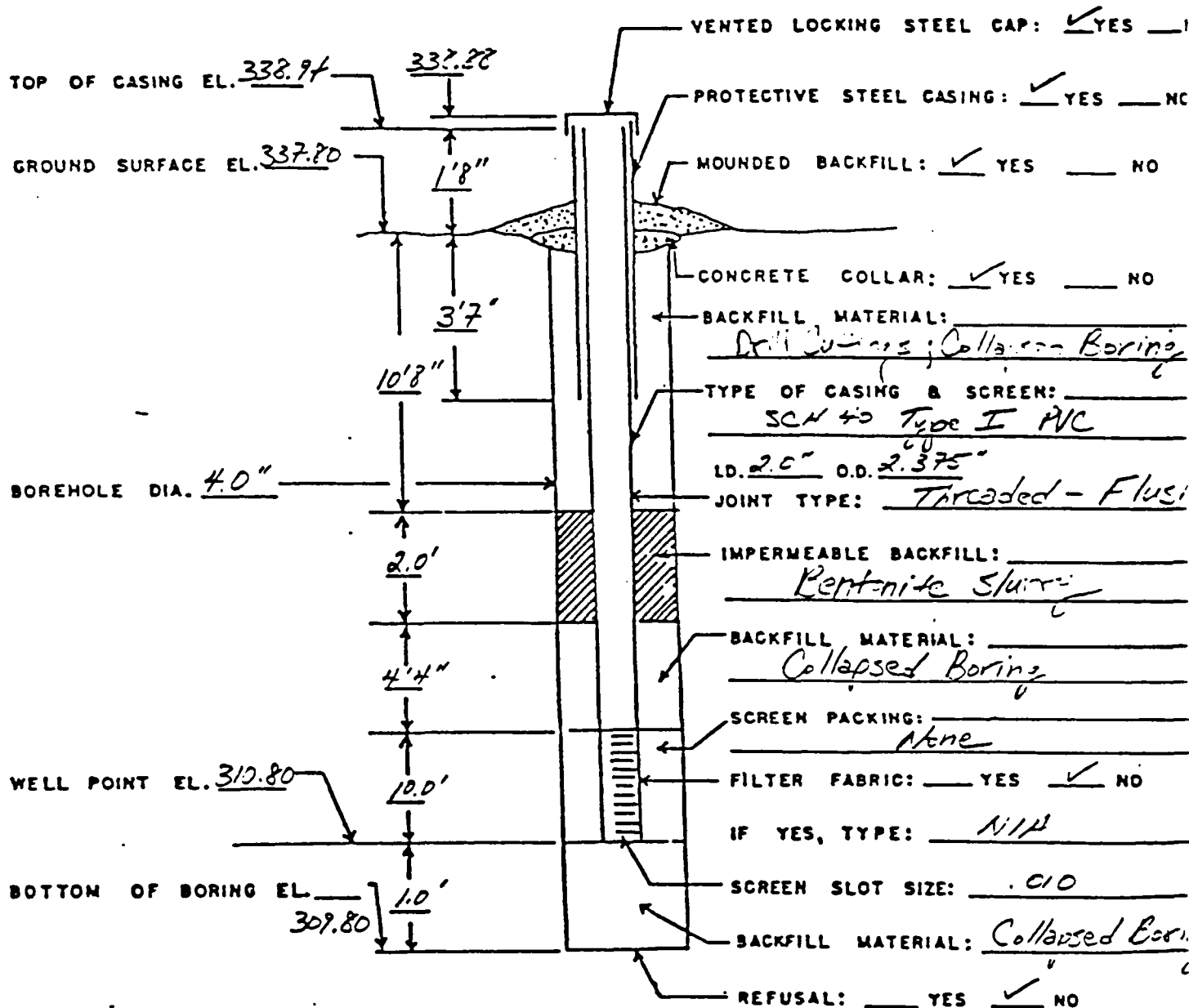
DRILLER <u>Roy Glenn</u>	ARCHITECT ENGINEER _____	FILE NO. _____
INSPECTOR <u>Rick Christians</u>	TYPE _____ SIZE I.D. <u>4"</u> HAMMER WT. <u>Air</u> HAMMER FALL _____	SURFACE ELEV. _____
DATE START <u>August 5, 1986</u>		LINE & STATION _____
DATE FINISH <u>August 5, 1986</u>		OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
									As per 44D 0-28.0' Drove Casing; No Samples Installed 2" PVC Monitor Well Bottom set at 28.0' 10.0' Screen; 20.0' Riser 1 Protective Casing ½ Hr. Steam Cleaning

SAMPLE IDENTIFICATION S — SPLIT SPOON T — THIN WALL TUBE U — UNDISTURBED PISTON O — OPEN END ROD W — WASH SAMPLE A — AUGER SAMPLE	PENETRATION RESISTANCE 140 lb. WL. falling 30" on 2" O.D. Sampler		PROPORTIONS USED 0 to 10% 10 to 20% 20 to 35% 35 to 50%	REMARKS: COL. A _____
	Consistency Density			
	0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense	Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-13 Stiff 14-30 V-Stiff 31+ Hard		

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 445



MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT*Site: *Envirite Corporation*Monitoring Point I.D. No.: *11W 445*Date of completion: *8.6.86*

DEP/WPC I.D. No:

*Wednesday*Monitoring Point Location (relative to site features): *SW Corner; Adjacent to Branch Brook*Drilling Contractor: *Glen Drilling, Inc.*

Supervising Engineer/Geologist:

Rick Christiana

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*337.8 ft.*Well depth below ground surface: *27.0*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

338.94 ft.

Screened interval:

Length of Screen: *10.0 ft.**27.0 ft to 17.0 ft.*Length of riser pipe: *19.0 ft.*Screen type: *Sloated PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slurry*Estimated K screened interval: *10⁻³ cm*Time spent developing: *30 min*Impermeable backfill: *Concrete Collar*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Saturated Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203) 887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite 85-329
 LOCATION Thomaston, CT

BORING
 NUMBER
 505

SHEET
 No. 1
 of 1

DRILLER Lou Rogers
 INSPECTOR Dave Montany
 DATE START July 26, 1986
 DATE FINISH July 30, 1986

ARCHITECT
 ENGINEER

Casing HSA Sampler SS Core Barrel
 TYPE 3 1/2" SIZE I.D. 1 1/2"
 HAMMER WT. 140#
 HAMMER FALL 30"

FILE NO. _____
 SURFACE ELEV. _____
 LINE & STATION _____
 OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-1	0-1.5'	2	4	6	0.7			Topsoil Fine-Medium Sand. Cobbles and Boulders
5	S-2	5.0'-6.5'	6	6	4	1.4			Fine-Medium Sand. Trace Fine Gravel. Trace Silt.
10	S-3	10.0'-11.5'	1	3	27	1.2			Fine-Medium Sand. Trace Silt. Fine-Medium Gravel. Wood
15	S-4	15.0'-16.5'	23	28	43	1.2			Fine-Coarse Sand. Trace Silt. Fine-Coarse Gravel.
20	C-1	19.0'-24.0'					5		Rock
	S-5	20.0'-20.2'	100/	2			7		Fine-Medium Sand and Broken Rock.
							8		
							8		
							8	24.0'	
									End of Boring: 24.0'
									Installed PVC Monitor Well Bottom set at 18.8' 1 Protective Casing 5.0' Screen; 16.0' Riser ½ Hr. Steam Cleaning

SAMPLE IDENTIFICATION

S — SPLIT SPOON
 T — THIN WALL TUBE
 U — UNDISTURBED PISTON
 O — OPEN END ROD
 W — WASH SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler
 Cohesiveness Density Cohesive Consistency
 0-4 Very Loose 0-2 Very Soft
 5-9 Loose 3-4 Soft
 10-29 Med. Dense 5-9 M/Silt
 30-69 Dense 10-15 Silt

PROPORTIONS USED

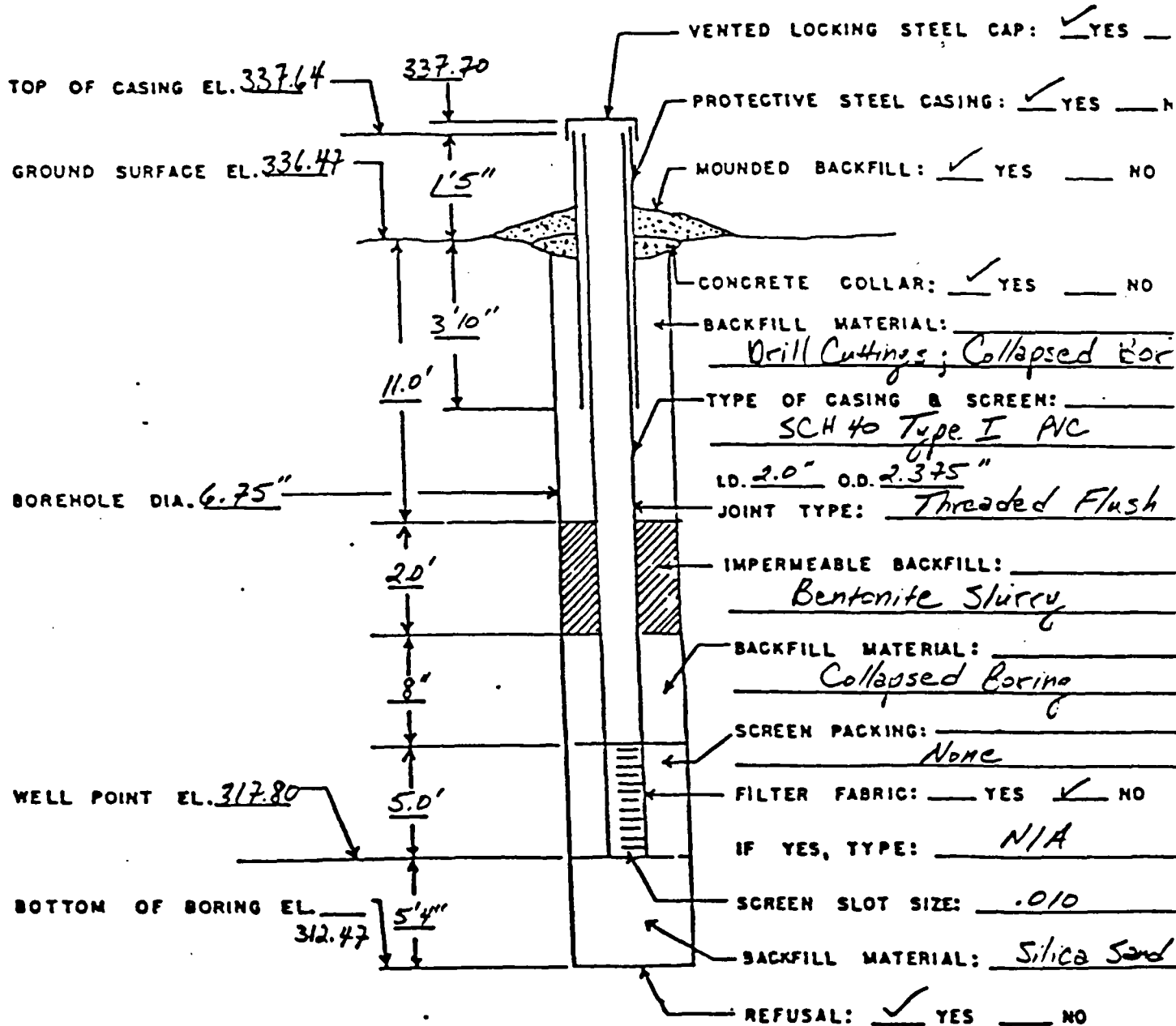
W 0 to 10%
 M 10 to 20%
 S 20 to 35%
 C 35 to 50%

REMARKS: Water @ 15.0

Hole A: 20.0'
 B: 19.0'
 C: 19.0'

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 505



MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Envirotec Corporation*Monitoring Point I.D. No.: *MW 50 S*Date of completion: *6.30.86*

DEP/WPC I.D. No:

*Monday*Monitoring Point Location (relative to site features): *East Side of Property;*Drilling Contractor: *Glenn Drilling, Inc.**NE Corner Adjacent to Main Entrance*Supervising Engineer/Geologist: *Dr. Rick Christian*

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*336.47 ft.*Well depth below ground surface: *18 ft*Refusal: ☒ Yes ☐ No

Top of casing elevation (MSL):

337.64 ft.

Screened interval:

Length of Screen: *5.0 ft**18 ft 8 in to 13 ft 8 in*Length of riser pipe: *15.0 ft.*Screen type: *Slotted PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

*Centrifugal*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slu*Estimated K screened interval: *10⁻³ c*Time spent developing: *1 hr.*Impermeable backfill: *Concrete Co*

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040				PROJECT/LOCATION				BORING NO. <u>MW-51B</u> SHEET <u>1</u> OF <u>3</u> JOB. NO. <u>91-580</u>																																																																																																																																																																									
				Envirite Corp.																																																																																																																																																																													
				Thomaston, Connecticut																																																																																																																																																																													
DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>							BORING LOCATION <u>5' South of MW-51D</u> GROUND ELEVATION _____ DATE STARTED <u>02/11/93</u> DATE FINISHED <u>02/18/93</u>																																																																																																																																																																										
DRILLING METHOD <u>Hollow Stem Auger/Spin Casing</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>							WATER LEVEL MEASUREMENTS																																																																																																																																																																										
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">DEPTH (ft.)</th> <th rowspan="2">CASING</th> <th colspan="4">SAMPLE</th> <th rowspan="2">SAMPLE DESCRIPTION</th> <th rowspan="2">USCS</th> <th rowspan="2">FIELD TESTING</th> <th rowspan="2">DEPTH (ft.)</th> </tr> <tr> <th>NO.</th> <th>DEPTH (ft)</th> <th>PEN REC.</th> <th>BLOWS/ 6"</th> <th>SOIL DENSITY</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>0-0.2': ASPHALT.</td> <td> </td> <td> </td> <td>0.0</td> </tr> <tr> <td>1.0</td> <td> </td> <td>S-1</td> <td>1-3</td> <td>24/22</td> <td>3 8 6 52</td> <td>SAND, F; trace C; little to some silt; trace gravel and cobbles; moderate yellowish brown to dark yellowish brown.</td> <td> </td> <td>0 ppm</td> <td>1.0</td> </tr> <tr> <td>2.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>2.0</td> </tr> <tr> <td>3.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>3': Large cobble.</td> <td> </td> <td> </td> <td>3.0</td> </tr> <tr> <td>4.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>4.0</td> </tr> <tr> <td>5.0</td> <td> </td> <td>S-2</td> <td>5-6</td> <td>11/11</td> <td>22 80 (5")</td> <td>5-5.3': SILT; little F sand; trace M and C sand; trace granules; grayish brown.</td> <td> </td> <td>0 ppm</td> <td>5.0</td> </tr> <tr> <td>6.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>5.3-5.5': Same as above, except trace F gravel and dark yellowish brown.</td> <td> </td> <td> </td> <td>6.0</td> </tr> <tr> <td>7.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>5.5-6': SAND, F; trace M and C; trace granules; little F-C gravel; little silt; moderate brown (5YR 4/4) to moderate yellowish</td> <td> </td> <td> </td> <td>7.0</td> </tr> <tr> <td>8.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>brown. 6': BOULDER.</td> <td> </td> <td> </td> <td>8.0</td> </tr> <tr> <td>9.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>9.0</td> </tr> <tr> <td>10.0</td> <td> </td> <td> </td> <td>10-12</td> <td> </td> <td> </td> <td>Boulders and cobbles. No sample taken.</td> <td> </td> <td> </td> <td>10.0</td> </tr> <tr> <td>11.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>11.0</td> </tr> <tr> <td>12.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>12.0</td> </tr> <tr> <td>13.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>13.0</td> </tr> <tr> <td>14.0</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td>14.0</td> </tr> </tbody> </table>							DEPTH (ft.)	CASING	SAMPLE				SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (ft.)	NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY	0.0						0-0.2': ASPHALT.			0.0	1.0		S-1	1-3	24/22	3 8 6 52	SAND, F; trace C; little to some silt; trace gravel and cobbles; moderate yellowish brown to dark yellowish brown.		0 ppm	1.0	2.0									2.0	3.0						3': Large cobble.			3.0	4.0									4.0	5.0		S-2	5-6	11/11	22 80 (5")	5-5.3': SILT; little F sand; trace M and C sand; trace granules; grayish brown.		0 ppm	5.0	6.0						5.3-5.5': Same as above, except trace F gravel and dark yellowish brown.			6.0	7.0						5.5-6': SAND, F; trace M and C; trace granules; little F-C gravel; little silt; moderate brown (5YR 4/4) to moderate yellowish			7.0	8.0						brown. 6': BOULDER.			8.0	9.0									9.0	10.0			10-12			Boulders and cobbles. No sample taken.			10.0	11.0									11.0	12.0									12.0	13.0									13.0	14.0									14.0	REMARKS: FIELD INSTRUMENT= OVM Model 580b 0.010" PVC Screen set 38.5 to 48.5 ft. Rock Seal at 38 ft. Bentonite Chips 30.5 to 38 ft. Bentonite Grout 0 to 30.5 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.				BORING NO. MW-51B	
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FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040	PROJECT/LOCATION		BORING NO. <u>MW-51B</u>
	Envirite Corp.		SHEET <u>2</u> OF <u>3</u>
	Thomaston, Connecticut		JOB. NO. <u>91-580</u>

DRILLING CO. <u>Arbor DRilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>	BORING LOCATION <u>5' South of MW-51D</u> GROUND ELEVATION _____ DATE STARTED <u>02/11/93</u> DATE FINISHED <u>02/18/93</u>
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DRILLING METHOD <u>Hollow Stem Auger/Spin Casing</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lb</u> HAMMER FALL (IN) <u>30</u>	WATER LEVEL MEASUREMENTS			
	DATE	MS. PT.	WATER AT	HR AFTER COMPLETION

DEPTH (FT.)	CASING blow log	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
15.0		S-3	15-17	24/6	3 2 19 39		SILT; little F sand; trace M and C sand; little F-C subangular gravel; trace extensively weathered schist fragment; moderate brown (5YR 4/4) to dark yellowish brown.		0 ppm	15.0
16.0										16.0
17.0							17-19': Cobbles and boulders.			17.0
18.0										18.0
19.0										19.0
20.0		S-4	20-22	24/7	8 43 42 18		SAND, F; trace M and C; little silt; trace to little gravel and cobbles; dark yellowish orange.		0 ppm	20.0
21.0										21.0
22.0										22.0
23.0										23.0
24.0										24.0
25.0		S-5	25-27	24/10	26 34 29 32		SAND, M-VC; trace F; trace to little silt; trace subangular to subrounded F-M gravel; trace cobbles; moderate reddish brown.		0 ppm	25.0
26.0										26.0
27.0										27.0
28.0										28.0
29.0										29.0

PROPORTIONS USED TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50% perfil/wellog04	BORING METHOD _____ _____ _____ _____ _____	DEPTH _____ _____ _____ _____ _____	REMARKS: FIELD INSTRUMENT = OVM Model 580B NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.	BORING NO. MW-51B
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[illegible]

FUSS & O'NEILL, INC.
CONSULTING
ENGINEERS

PROJECT/LOCATION

BORING NO.: MW-51B

Enviroite Corp.

SHEET 1 OF 1

Thomaston, Connecticut

JOB NO.: 91-580

DEERES ROCK QUALITY DESIGNATIONS

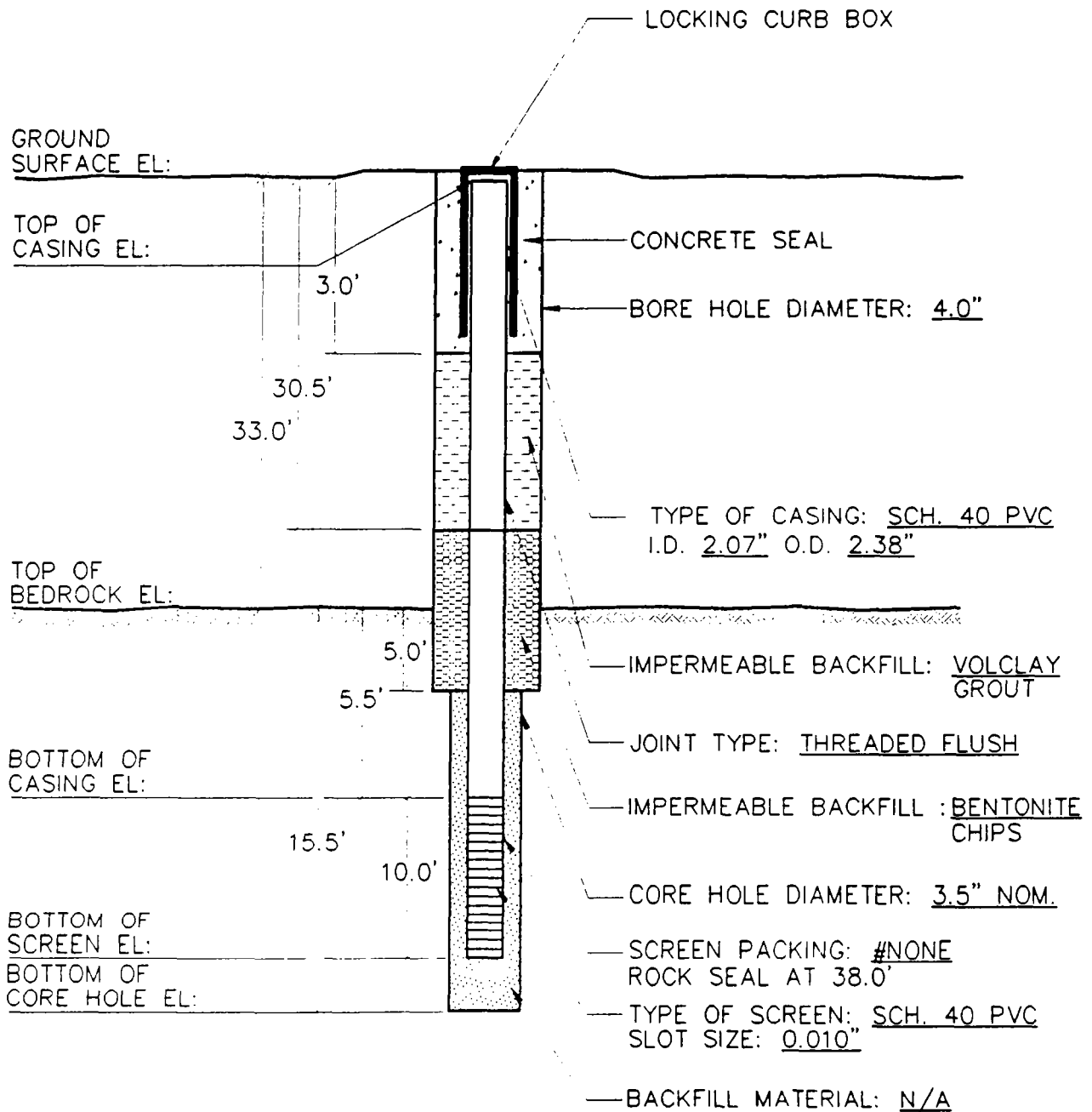
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perfil\rqdlmstr

FUSS & ONEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040			ROCK CORE LOG			BORING NO. MW-51B SHEET 1 OF 1 JOB NO. 91-580			
			PROJECT: Envirite Corp.						
			LOCATION: Thmoaston, Ct						
DRILLING CO.: Arbor Drilling			DATE STARTED: 2/18/93			DATE FINISHED: 2/18/93			
DRILLER: David Kowaleski			GROUND ELEVATION:						
CORING METHOD: NQ Core Barrel/Roller Cone			CORE DIAMETER: 3 7/8"						
FUSS & O'NEILL REPRESENTATIVE:									
DEPTH	COMMENTS <small>TEST INSUFFICIENT CORING RATE AND SMOOTHNESS CORING FLUID LOSS</small>	CORE RUN LENGTH AND RECOVERY(%)	CORE LOSS ZONE	DISCONTINUITIES			LITHOLOGY		CRAWLING LOG
				PROD	HOURS PER FOOT	DESCRIPTION <small>TIGHTNESS SPACING PLANARITY SMOOTHNESS FILLING ORIENTATION ALTERATION STAINING WEATHERING STRUCTURE</small>	<small>MINERALOGY CLASSIFICATION COLOR GRAIN SIZE ALTERATION FORMATION NAME</small>	<small>CEMENTATION HARDNESS WEATHERED STATE TEXTURE ORIENTATION SPACING</small>	
31.5	Core rate 1.07 ft./min. Smooth coring Little chatter Moderate to low fluid loss	7' 96%	0.5'	100 %	32.1 33.0 33.7 34.4 35.9 37.1	Fractures at 32.1, 33.0, 33.7, 34.4, 35.9, and 37.1 feet. Horizontal, very tight, nonplanar, rough. No filling or staining.	Granitic gneiss with poorly developed bands of biotite, grayish white, fine to coarse. Fresh with no weathering. No staining or filling in fractures.		
38.5	Core rate 1.25 ft./min. Smooth coring Moderate to low fluid loss	8' 100%	0.0'		39.9 41.6 43.1 43.2 45.5 45.7	Horizontal to less than 20 degree tight to very tight, rough, weathered fractures at 43.1 and 43.2 feet. No filling. Horizontal fracture at 45.7 feet to bottom.	Same as above.		
16.5									

perfill/r-core3

WELL NO. MW-51B



FUSS & O'NEILL INC.

consulting engineers

147 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040

203/ 644-5449

WELL CONSTRUCTION DETAILS
MW-51B

ENVIRITE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W51B.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-51B**

Date of Completion: **2/18/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

John Brogden

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **48.5 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **38.5 to 48.5 ft.** :

Length of Screen:

Length of Riser Pipe: **38 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Time Spent Developing:

Impermeable Backfill:

Volclay Grout

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Locking **X** or Threaded Cap

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **7.0, 8.0 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **30.5 to 38 ft.**

O-ring Seals: Yes: ☒ No:

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

Inferred Relationship to Plume; Within ☒ Outside Edge

Watershed (Plume Discharge Watercourse): **Branch Brook**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203)887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite
 LOCATION Thomaston, CT

BORING
 NUMBER
 51D

SHEET

No. 1
 of 1

DRILLER Roy Glenn

ARCHITECT
 ENGINEER

FILE NO. _____

INSPECTOR Rick

	Casing HW	Sampler SS	Core Barrel
TYPE	4"	1 1/2"	
SIZE I.D.			
HAMMER WT.	Air	140#	
HAMMER FALL		30"	

SURFACE ELEV. _____

DATE START July 29, 1986

LINE & STATION _____

DATE FINISH July 30, 1986

OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
5'									Same as 51 A
10'	S-1	9.5'-10.1'	9	50/.1		0.2			Brown Fine-Coarse Sand, Gravel and Boulders
15'	S-2	14.0'-15.5'	16	12	12	0.3			Fractured Gneiss and Schist Boulders
20'	S-3	19.0'-21.5'	12	30	24	0.7			Gray Fine-Medium Sand with Rock Fragments.
25'	S-4	24.0'-25.5'	14	30	42	1.1			Brown Fine-Coarse Sand and Gravel. Little Silt.
30'	S-5	29.0'-30.5'	14	26	30	00.5			
								32.0'	
								34.0'	Gneiss and Schist Rock.
									End of Boring: 34.0'
									Installed PVC Monitor Well
									Bottom set at 28.5'
									10.0' Screen; 18.5' Riser
									3/4 Hr. Steam Cleaning 1 Curb Box

SAMPLE IDENTIFICATION

S — SPLIT SPOON
 T — THIN WALL TUBE
 U — UNDISTURBED PISTON
 O — OPEN END ROD
 W — WASH SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler

Consistency	Density	Consistency	Density
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	Med. Stiff
30-49	Dense	9-15	Stiff
		16-25	Very Stiff

PROPORTIONS USED

Grass 0 to 10%
 Silt 10 to 20%
 Sand 20 to 35%
 and 35 to 50%

REMARKS:

COL. A

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thornston, CT.*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW 510*Date of completion: *7.30.86*

DEP/WPC I.D. No:

*Wednesday*Monitoring Point Location (relative to site features): *Center of Property; Behind Plant - Center of Building*Drilling Contractor: *Glenn Drilling, Inc.*Supervising Engineer/Geologist:
Rick Christiana

Well Construction Method:

*Hollow Stem Augers - Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

Well depth below ground surface: *28 ft*Refusal: ☐ Yes ☒ NoTop of casing elevation (MSL): *N/A*

Screened interval:

Length of Screen: *10.0 ft**28 ft 3 in to 18 ft 3 in*Length of riser pipe: *18 ft 3 in*Screen type: *Slotted PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☒ Yes ☐ NoIf yes, Thickness: *12 ft 3 in*

Well inside diameter:

*2.0 in*Material: *Silica Sand*
grain size: *#18*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

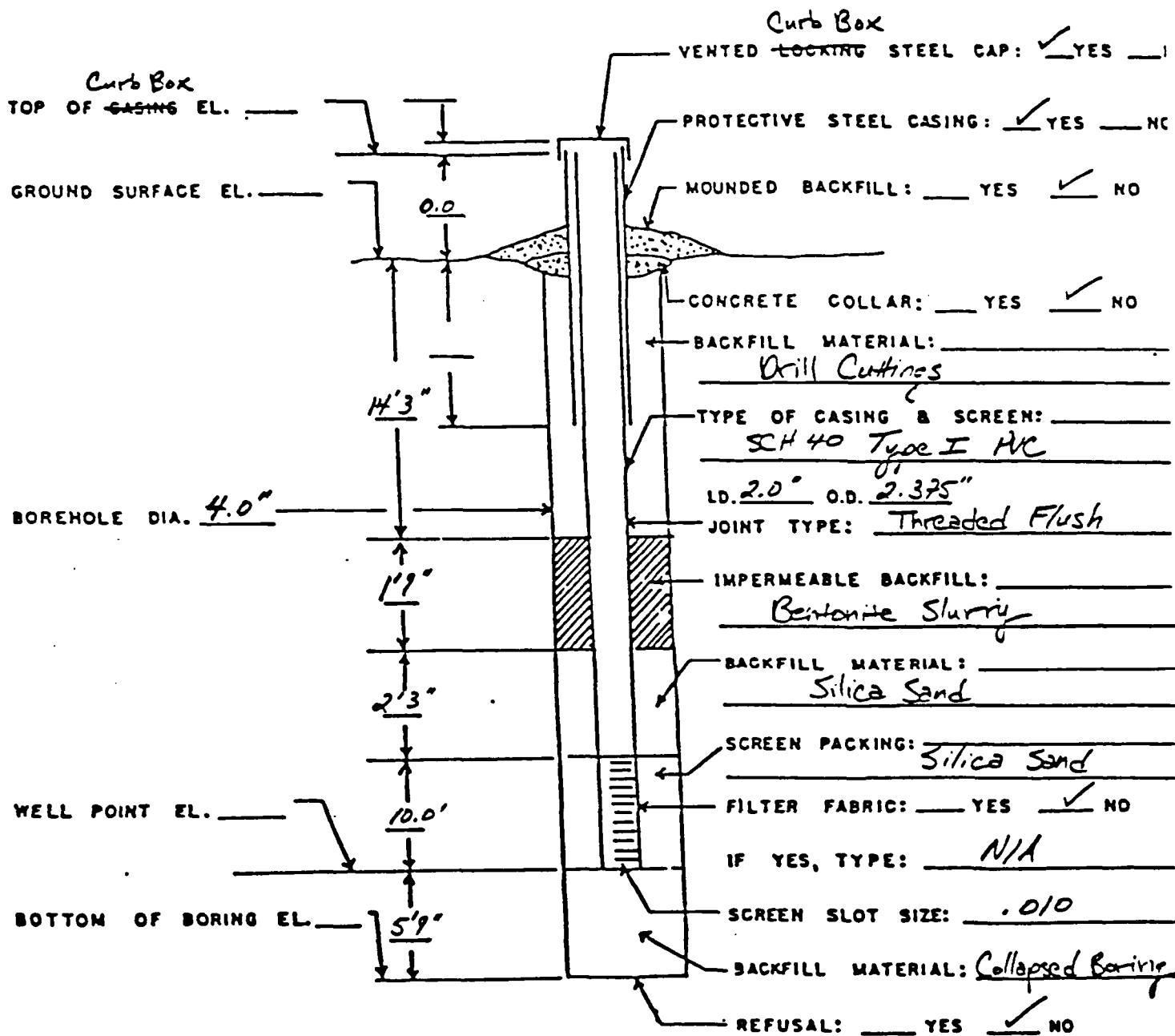
*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slurry*Estimated K screened interval: *10⁻³ c*Time spent developing: *1 hr 15 min*Impermeable backfill: *Curb Box*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

mw 510



Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203) 887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite
 LOCATION Thomaston, CT

BORING
 NUMBER
 52D
 SHEET
 No. 1
 of 2

DRILLER Steve Cohen
 INSPECTOR Rick
 DATE START July 25, 1986
 DATE FINISH July 28, 1986

ARCHITECT
 ENGINEER

TYPE _____
 SIZE I.D. _____
 HAMMER WT. _____
 HAMMER FALL _____
 Casing HW
 Sampler SS
 Core Barrel _____
4"
1 1/4"
Air
140#
30"

FILE NO. _____
 SURFACE ELEV. _____
 LINE & STATION _____
 OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
5	S-1	4.0'-5.0'	14	60		0.3			Sand and Gravel. (Fill)
10									
15	S-2	14.2'-15.0'	75	100		0.1			Rock Chips
20									
25	S-3	24.0'-25.5'	19	11	10	0.2			Fine-Coarse Sand. Medium Gravel. Tra Silt. Rock Chips
30									
35	S-4	34.0'-35.5'	2	1	15	1.5			Fine-Coarse Sand. Fine-Medium Gravel
	S-5	39.0'-40.5'	18	20	29	0.3			Same as above

SAMPLE IDENTIFICATION
 S — SPLIT SPOON
 T — THIN WALL TUBE
 U — UNDISTURBED PISTON
 O — OPEN END ROD
 W — WASH SAMPLE

PENETRATION RESISTANCE
 140 lb. Wt. falling 30" on 2" O.D. Sampler
 Consistency Density Consistency
 0-4 Very Loose 0-2 Very Soft
 5-9 Loose 3-4 Soft
 10-29 Med. Dense 5-8 Stiff
 30-49 Dense 9-15 Very Stiff
 50+ Very Dense 16-30 Hard

PROPORTIONS USED
 trace 0 to 10%
 little 10 to 20%
 some 20 to 35%
 and 35 to 50%

REMARKS:
 Water @ 20.5'

COL. A _____

Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203) 887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite
 LOCATION Thomaston, CT

BORING
 NUMBER
52D
 SHEET
 No. 2
 of 2

DRILLER Steve Cohen

ARCHITECT
 ENGINEER

FILE NO. _____

INSPECTOR Rick

	Casing	Sampler	Core Barrel
TYPE	HW	SS	
SIZE I.D.	4"	1 1/2"	
HAMMER WT.	Air	140#	
HAMMER FALL		30"	

SURFACE ELEV. _____

DATE START July 25, 1986

LINE & STATION _____

DATE FINISH July 28, 1986

OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
45	S-6	44.0'-45.5'	11	14	15	1.5			Fine-Coarse Sand. Fine-Coarse Gravel. Trace Silt.
50	S-7	49.0'-50.5'	4	2	12	1.5			Same as above.
55	S-8	54.0'-55.5'	9	11	20	0.5			
60								61.0'	Refusal
									End of Boring: 61.0'
									Installed 2" PVC Monitor Well
									Bottom set at 50.5'
									15.0' Screen; 45.5' Riser
									1 Protective Casing with Lock
									1 1/4 Hr Steam Cleaning
						</			

SAMPLE IDENTIFICATION

S — SPLIT SPOON
 T — THIN WALL TUBE
 U — UNDISTURBED PISTON
 O — OPEN END ROD
 W — WASH SAMPLE

PENETRATION RESISTANCE

140 lb. Wt. falling 30" on 2" O.D. Sampler

Cohesiveness Density		Cohesive Consistency	
0-4	Very Loose	0-2	Very Soft
5-9	Loose	3-4	Soft
10-29	Med. Dense	5-8	Stiff
30-49	Dense	9-15	Very Stiff
50 +	Very Dense	16-30	Hard

PROPORTIONS USED

sand 0 to 10%
 silt 10 to 20%
 some 20 to 35%
 and 35 to 50%

REMARKS:

COL. A _____

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW 520*Date of completion: *7.28.86*

DEP/WPC I.D. No:

*Monday*Monitoring Point Location (relative to site features): *Center of Property; Adj
to Metal Staircase*Drilling Contractor: *Gleim Drilling, Inc.*

Supervising Engineer/Geologist:

Rick Christiana

Well Construction Method:

*Hollow Stem Auger - Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*342.74 ft.*Well depth below ground surface: *57.6*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

344.37 ft.

Screened interval:

Length of Screen: *15.0 ft.**58 ft 6 in to 73 ft 6 in*Length of riser pipe: *45.5 ft.*Screen type: *Sloped PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I PVC

Method of well development:

*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Slurr*Estimated K screened interval: *10⁻³ c*Time spent developing: *1 hr 10 min*Impermeable backfill: *Concrete Co.*

Bedrock wells

Casing length: *N/A*

Water-bearing rock unit: *N/A*

Water bearing sections (depths and approximate yields): *N/A*

Length of rock core: *N/A*

Diameter of core hole: *N/A*

Thickness and depth of impermeable backfill: *N/A*

O-rings seals: ☐ Yes ☐ No *N/A*

GEOLOGIC INFORMATION

Aquifer: *Stratified Drift*

Inferred relationship to plume: ☒ Within ☐ Outside ☐ Edge

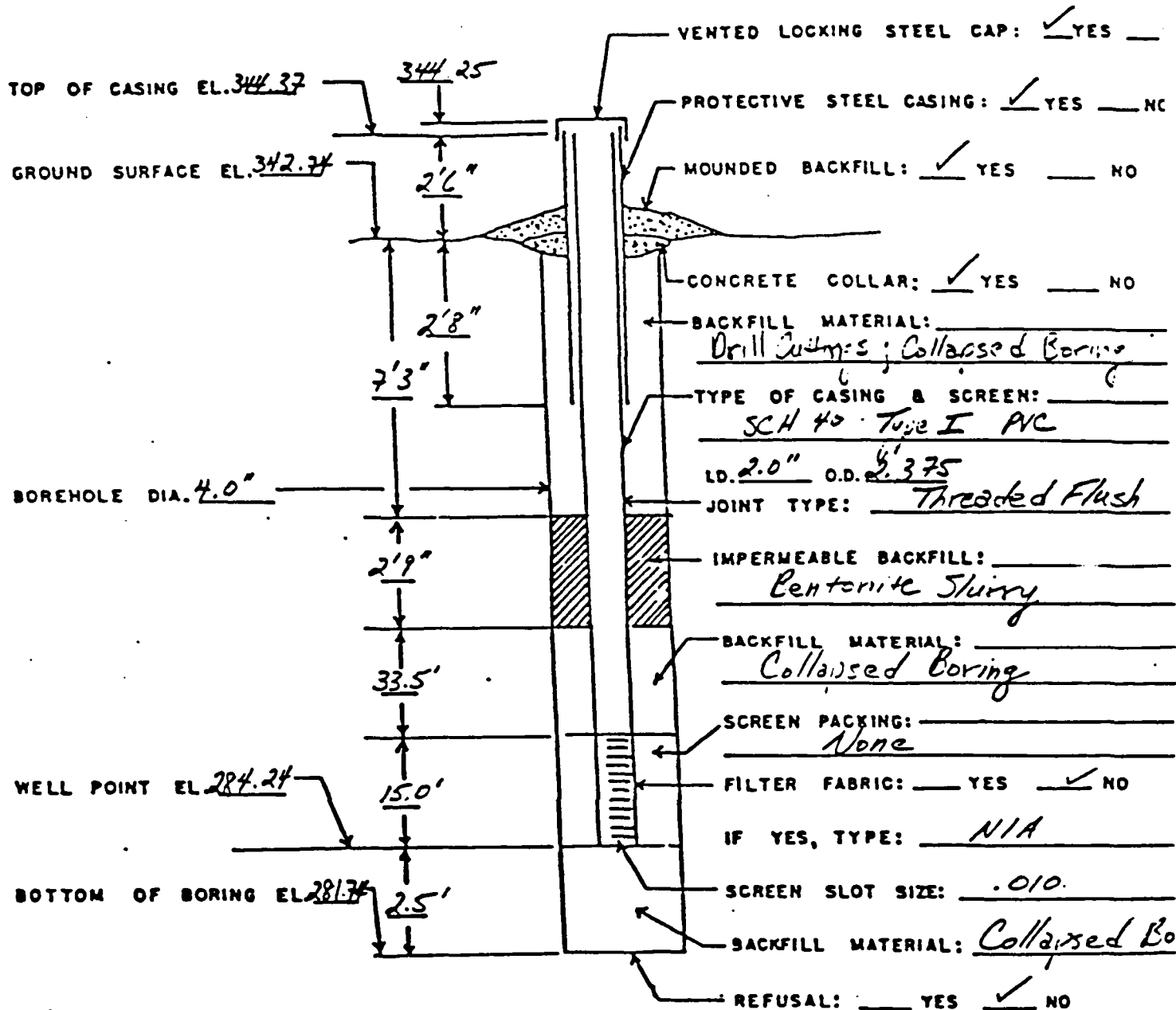
Watershed (plume discharge watercourse): *Naugatuck River; Branch Brook*

Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

MW 520



Glenn Drilling Inc.
 Scott Hill Road
 Colchester, Ct 06415
 (203)887-3621

CLIENT Fuss & O'Neill
 PROJECT NAME Envirite 85
 LOCATION Thomaston, CT

BORING
 NUMBER
 MW-53D
 SHEET
 No. 1
 of 1

DRILLER Steve Cohen
 INSPECTOR Rick
 DATE START July 23, 1986
 DATE FINISH July 24, 1986

ARCHITECT
 ENGINEER

Casing Sampler Core Barrel
 TYPE SS
 SIZE I.D. 4" 1 1/2"
 HAMMER WT. 140#
 HAMMER FALL 30"

FILE NO. _____
 SURFACE ELEV. _____
 LINE & STATION _____
 OFFSET _____

DEPTH	SAMPLE						COL. A	STRATA CHANGE	FIELD CLASSIFICATION AND REMARKS
	NO.	DEPTH RANGE	BLOWS PER 6" ON SAMPLER			REC.			
			0-6	6-12	12-18				
	S-1	0-1.5'	3	5	7	1.2			Topsoil
									Fine-Coarse Sand. Fine-Coarse Silt.
5'	S-2								
10'	S-2	10.0'-11.5'	1	2	1	1.4		13.0'	Fine-Coarse Sand and Silt. Trace Fine Gravel. (WET)
15'	S-3	15.0'-16.5'	18	56	72	0.7			Fine-Coarse Sand. Fine-Medium Gravel Fill
20'	S-4	20.0'-21.5'	2	2	6	1.5			Fine-Coarse Sand.
25'	S-5	25.0'-26.5'	43	41	40	0.9			Fine-Coarse Sand and Fine-Medium Gravel.
30'	S-6	30.0'-31.5'	10	14	18	1.2			Fine-Coarse Sand and Fine-Medium Gravel. Little Silt.
35'	S-7	35.0'-36.5'	10	4	8	1.0			Fine-Coarse Sand. Fine-Medium Gravel.
40'	S-8	40.0'-41.5'	12	13	7	2.0			Fine-Coarse Sand. 41.5'-43.0' Bo

SAMPLE IDENTIFICATION
 S — SPLIT SPOON
 T — THIN WALL TUBE
 U — UNDISTURBED PISTON
 O — OPEN END ROD
 W — WASH SAMPLE
 A — AUGER SAMPLE

PENETRATION RESISTANCE
 140 lb. Wt. falling 30" on 2" O.D. Sampler
 Consistency Density Consistency
 0-4 Very Loose 6-8 Very Soft
 5-9 Loose 9-12 Soft
 10-29 Med. Dense 13-15 Stiff
 30-49 Dense 16-30 V-Stiff
 50+ Very Dense 31+ Hard

PROPORTIONS USED
 sand 8 to 10%
 silt 10 to 20%
 clay 30 to 35%
 and 35 to 50%

REMARKS
 End of Boring; 4'
 Bottom of Well 40.0'
 15.0' Screen; 30.0' R/L
 1 Protective Casing
 COL. A 3/4 Hr. Steam

MONITOR WELL COMPLETION REPORTGENERAL INFORMATIONTown: *Thomaston, CT.*Site: *Enviro Corporation*Monitoring Point I.D. No.: *MW 53 D*Date of completion: *7.24.86*

DEP/WPC I.D. No:

*Thursday*Monitoring Point Location (relative to site features): *East Side of Property;
Along Fence, Approx 110 ft. North of Main.*Drilling Contractor: *Glenn Drilling, Inc.*Supervising Engineer/Geologist: *Ernest**Rick Christensen*

Well Construction Method:

*Hollow Stem Auger; Air Hammer - 4" Casing*WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground surface elevation (MSL):

*338.43 ft.*Well depth below ground surface: *40.0*Refusal: ☐ Yes ☒ No

Top of casing elevation (MSL):

Length of Screen: *15.0 ft* *339.73 ft.*

Screened interval:

*40.0 ft to 25.0 ft*Length of riser pipe: *26.5 ft*Screen type: *Slotted PVC*Screen Slot size: *.010*Filter fabric: ☐ Yes ☒ NoScreen packing: ☐ Yes ☒ NoIf yes, Thickness: *N/A*

Well inside diameter:

*2.0 in*Material: *N/A*grain size: *N/A*

Well casing material and schedule:

SCH 40 Type I AC

Method of well development:

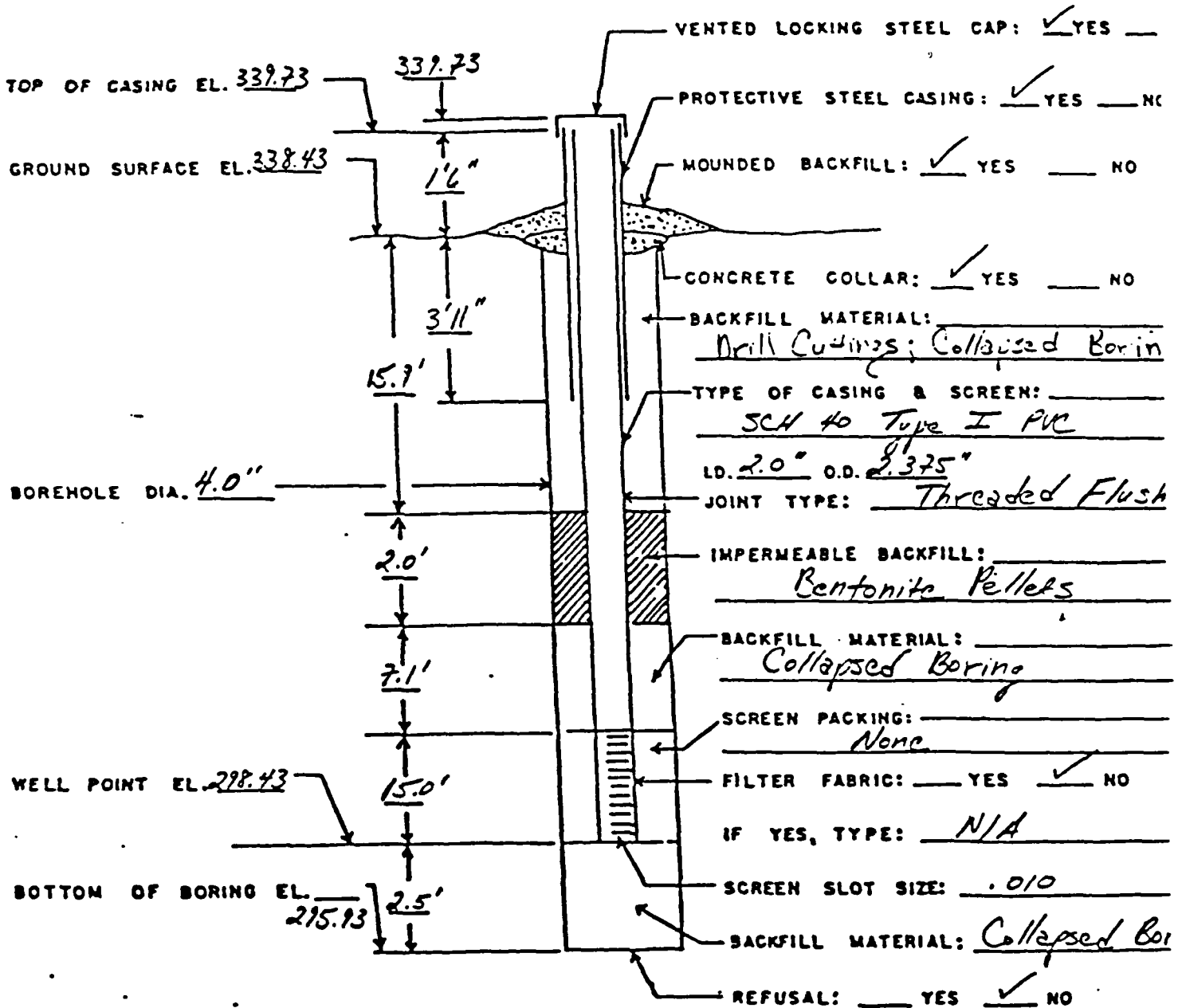
*Centrifugal Pump*Locking ☒ or threaded cap ☐Impermeable Backfill: *Bentonite Pellets*Estimated K screened interval: *10⁻³ cm*Time spent developing: *1 hr.*Impermeable backfill: *Concrete Coll.*

Bedrock wellsCasing length: *N/A*Water-bearing rock unit: *N/A*Water bearing sections (depths and approximate yields): *N/A*Length of rock core: *N/A*Diameter of core hole: *N/A*Thickness and depth of impermeable backfill: *N/A*O-rings seals: ☐ Yes ☐ No *N/A*GEOLOGIC INFORMATIONAquifer: *Stratified Drift*Inferred relationship to plume: ☒ Within ☐ Outside ☐ EdgeWatershed (plume discharge watercourse): *Naugatuck River; Branch Brook*Aquifer materials (attach boring log): *Sand and Gravel*

Attach maps and plans required of G.1.j. and G.4.

MONITOR WELL INSTALLATION DETAIL FOR WELL IN UNCONSOLIDATED DEPOSIT

mw 530




FUSS & O'NEILL, INC. MANCHESTER, CT 06040 CONSULTING ENGINEERS	PROJECT/LOCATION	BORING NO. <u>MW-55b</u>
	Envirite Corporation	SHEET <u>1</u> OF <u>1</u>
	Thomaston, Connecticut	JOB. NO. <u>88-461</u>

DRILLING CO. <u>Walti</u> MILLER <u>Joe Faulkner</u> FUSS & O'NEILL REPRESENTATIVE <u>J. Saxton</u>	BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>1/18/90</u> DATE FINISHED <u>1/19/90</u>
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DRILLING METHOD _____ SAMPLING METHOD _____ HAMMER WT. _____ HAMMER FALL (IN) _____	WATER LEVEL MEASUREMENTS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>MS. PT.</th> <th>WATER AT</th> <th>HR AFTER COMPLETION</th> </tr> <tr> <td>1/18/90</td> <td>Ground</td> <td>10.5'</td> <td></td> </tr> </table>	DATE	MS. PT.	WATER AT	HR AFTER COMPLETION	1/18/90	Ground	10.5'	
DATE	MS. PT.	WATER AT	HR AFTER COMPLETION						
1/18/90	Ground	10.5'							

DEPTH (ft.)	CASING blows/ft	SAMPLE				SAMPLE DESCRIPTION	STRATA CHANGE/ GEN. DESCRIP.	WELL CONST. DETAILS	FIELD TESTING	REMARKS
		NO.	DEPTH (ft.)	PEN REC.	BLOWS/ 6"					
5						Sand; trace boulders.		Cement		
10						Gneiss; little quartz vein; trace schist trace vertical fractures				
15								Bentonite		
20						Major fracture (Loss of water)				
25						Bottom of boring		Screen interval		
								Silica sand		

PROPORTIONS USED TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50%	BORING METHOD Spun 4" casing 3' dia bit core	DEPTH 0-11' 11-25'	REMARKS: 10' screen 16.5' riser depth @ 25' sand to 13' bentonite 11-13' grout 2-11' cement 0-2'
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BORING NO. MW-55B

Date	Time	Depth	Casing	Stab. Time
12/6/93	1400	9.4'		
12/6/93	1405	9.3'		
1/3/94	0900	10.29'		

1. Performed field screening on soil samples with a portable HNu (PID). ND indicates None Detected.

Boring No. MW-56S

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. MW-56D Page <u>2</u> of <u>2</u> File No. <u>41182</u> Chkd. By: <u>RPM</u>				
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Boring Co. KENNEDY AND SONS Foreman <u>Bill Kennedy</u> GZA GeoEnvironmental Rep. <u>Thomas Loto</u> Date Start <u>12/29/93</u> End <u>1/5/94</u> Location <u>See Plan</u> GS.Elev. _____ Datum _____			Casing <u>HSA</u> Sampler <u>S.S.</u> I.D./O.D. <u>4-1/4"</u> <u>2" O.D.</u> Hammer Wt. <u>300 LB.</u> <u>140 LB.</u> Hammer Fall <u>30"</u> <u>30"</u> Other _____			Groundwater Readings																									
					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Time</th> <th>Depth</th> <th>Casing</th> <th>Stab. Time</th> </tr> <tr> <td>1/3/94</td> <td>0830</td> <td></td> <td></td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Date	Time	Depth	Casing	Stab. Time	1/3/94	0830																		
Date	Time	Depth	Casing	Stab. Time																											
1/3/94	0830																														

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
35		S-4	24/16	30-32	6-6	ND	Medium dense, light-brown, fine to medium SAND, trace Silt	FINE TO MEDIUM SAND	40.0'	<div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; position: relative;"> <div style="position: absolute; top: 0; right: 0; width: 50px;">Grout 2'-44'</div> <div style="position: absolute; top: 30%; right: 0; width: 50px;">2" PVC riser 0'-49'</div> </div>
40		S-5	24/0	35-37	13-7	ND	No recovery			
45		S-6	24/8	40-42	12-16	ND	Dense, light-brown, fine SAND, trace fine Gravel, little Silt	FINE SAND	53.4'	<div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; position: relative;"> <div style="position: absolute; top: 50%; right: 0; width: 50px;">Bentonite seal 44'-46'</div> <div style="position: absolute; top: 60%; right: 0; width: 50px;">Filter sand 46'-54'</div> <div style="position: absolute; top: 70%; right: 0; width: 50px;">2" PVC screen 49'-54'</div> </div>
50		S-7	24/12	42-44	12-16	ND	Very dense, light-brown, fine SAND, trace (+) Silt			
55		S-8	24/18	44-46	7-9	ND	Medium dense, brown, fine SAND, little (-) Silt			
55		S-9	24/18	46-48	10-8	ND	Medium dense, brown, fine SAND, little (-) Silt			
55		S-10	24/12	48-50	12-14	ND	Medium dense, brown, fine SAND, little (-) Silt			
55		S-11	24/14	50-52	7-9	ND	Medium dense, brown, fine SAND, little (-) Silt, trace Organic fibers			
55		S-12	24/12	52-53.4	10-23	ND	Dense, brown, fine SAND, little (-) Silt, trace Organic fibers	END OF EXPLORATION (REFUSAL)		

Remarks

- Performed field screening on soil samples with a portable HNu (PID); ND indicates None Detected.
- Stratum description for top 15 feet based on nearby boring MW-56S.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-56D

**27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655**

**ENVIRTE
THOMASTON, CONNECTICUT**

Boring No. MW-57

Page 1 of 1

File No. 41182

Chkd. By: RPM

Foring Co. KENNEDY AND SONS

Foreman **Bill Kennedy**

**GZA
GeoEnvironmental
Rep. Thomas Loto**

Date Start 12/6/93 End 12/6/93

Location	See Plan
----------	----------

GS.Elev. _____ Datum _____

Type

I.D./O.D.

Hammer Wt.

Hammer Fall

Other

Casing

HSA

41/

Sampler

S.S.

2" O.D.

140 LB

30ⁿ

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
------	------	-------	--------	------------

12/6/93	1110	8.4'		
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12/6/93	1130	8.6'		
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12/6/93	1400	8.11'		
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[illegible]

Remarks

1. Performed field screening on soil samples with a portable HNu (PID); ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-57

Boring No. MW-58S

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. MW-58D

Page 1 of 3

File No. 41182

Chkd. By: RPM

Boring Co. KENNEDY AND SONS

Foreman Bill Kennedy

Type

Casing

HSA

Sampler

S.S.

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

GZA
GeoEnvironmental
Rep. Thomas Loto/Valerie Roe

I.D./O.D.

4-1/4"

2" O.D.

Hammer Wt.

300 LB.

140 LB.

Date Start 12/7/93 End 12/20/93

Hammer Fall

30"

30"

Location See Plan

Other

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data					
5							NO SAMPLING TO 7 FEET FOR DESCRIPTION OF SOIL SAMPLES 0-7 FEET SEE LOG MW-58S	0.3' TOPSOIL	1.		
									2.		
								SILTY FINE SAND			Concrete 0'-3'
								6.0'			
								FINE TO MEDIUM 7.0' SAND			
10		S-1	24/8	7-9	30-30		Dense, light-brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt				
					16-20						
15		S-2	24/7	15-17	15-12		Medium dense, light-brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt				
					12-12						
20		S-3	24/6	20-22	36-14		Dense, light-brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt				
					16-18						
25		S-4	24/7	25-27	33-45		Very dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt				
					16-20						
		S-5	24/9	27-29	23-29		Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt				
					20-20						

R
e
m
a
r
k
s

1. Did not perform field screening on soil samples because HNu was not operating properly.
2. Stratum description for top 7 feet based on nearby boring MW-58S.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-58D

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. MW-58D

Page 2 of 3

File No. 41182

Chkd. By: RPM

Boring Co. KENNEDY AND SONS

Foreman Bill Kennedy

GZA
GeoEnvironmental
Rep. Thomas Loto/ Valerie Roe

Date Start 12/7/93 End 12/20/93

Location See Plan

Type HSA S.S.

I.D./O.D. 4-1/4" 2" O.D.

Hammer Wt. 300 LB. 140 LB.

Hammer Fall 30" 30"

Other

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification		Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data						
30		S-6	24/5	29-31	16-9		Medium dense, light-brown, fine to coarse GRAVEL and fine to coarse SAND, trace Silt		SAND AND GRAVEL			
					12-22							
		S-7	24/8	31-33	15-14		Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
35					20-29							
		S-8	24/7	33-35	23-20		Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					18-17							
		S-9	24/4	35-37	9-10		Medium dense, light-brown, fine GRAVEL, some fine to coarse Sand, trace Silt					
40					5-5							
		S-10		37-39	6-10		No recovery					
					7-8		Medium dense, light-brown, fine to coarse SAND, some fine Gravel (Quartz fragments), little Silt					
		S-11	17/1	39-40.4	11-18-50/5		40.4'					
		S-12	24/17	40-42	38-24	ND	Very dense, light-brown, fine to coarse SAND, little (+) fine Gravel, trace Silt					
					40-25							
		S-13	24/20	42-44	24-22	ND	Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
45					22-33							
		S-14	24/5	44-46	34-27	ND	Very dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					57-30							
		S-15	24/8	46-48	25-17	ND	Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					28-31							
50		S-16	24/8	48-50	25-17	ND	Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					28-31							
		S-17	24/0	50-52	25-23	ND	No recovery					
					17-23							
55		S-18	24/12	52-54	27-16	ND	Medium dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					12-32							
		S-19	24/12	54-56	11-16	ND	Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					18-19							
		S-20	24/14	56-58	17-17	ND	Top 7": Dense, light-brown, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt					
					37-50		Bottom 7": Very dense, light-brown, fine SAND, trace Silt					
		S-21	24/0	58-60	47-50	ND	No recovery - all wash					
					50/4"				FINE SAND			

Cement
Grout
3'-61.1'

2" PVC
riser
0'-68.5'

3. Performed field screening on soil samples with a portable HNu (PID). ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-58

GZA GEOENVIRONMENTAL, INC.

Consulting Engineers/Geologists/Environmental Scientists

27 Nack Road

Vernon, Connecticut 06066

(203) 875-7655

ENVIRITE

THOMASTON, CONNECTICUT

Boring No. MW-58D

Page 3 of 3

File No. 41182

Chkd. By: RPM

Boring Co. KENNEDY AND SONS

Foreman Bill Kennedy

GZA GeoEnvironmental Rep. Thomas Loto/Valerie Roe

Date Start 12/7/93 End 12/20/93

Location See Plan

Type HSA

I.D./O.D. 4-1/4"

Hammer Wt. 300 LB.

Hammer Fall 30"

Other

Casing

S.S.

2" O.D.

140 LB.

30"

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
65		S-22	24/6	60-62	18-24	ND	Very dense, light-brown, fine SAND, trace Silt	FINE SAND	4.	<div> <div>Cement Grout 0'-61.1'</div> <div>Bentonite Grout 61.1'-63.1'</div> </div>
					26-30					
		S-23	24/12	62-64	21-22	ND	Dense, light-brown, fine SAND, trace Silt	64.0'		
					22-32					
		S-24	24/4	64-66	22-21	ND	Dense, light-brown to black, fine to medium SAND, trace fine Gravel			
					22-38					
	S-25	24/0	66-68	3-4	ND	No recovery	FINE TO COARSE SAND			
				4-3						
70		S-26	24/6	68-70	7-8	ND	Medium dense, light-brown to grey, fine to coarse SAND, little fine to coarse Gravel, trace Silt			
					22-33					
		S-27	24/1	70-72	44-46	ND	Very dense, light-brown, fine to coarse SAND, trace Silt			
				31-30						
75		S-28	20/6	72-73.7	28-39	ND	Very dense, light-brown to orange, fine to coarse SAND, little fine Gravel, trace Silt (TILL)	75.1'		
					47-50/2"					
								END OF EXPLORATION (REFUSAL)		

Remarks

4. A bentonite grout was used as the bentonite seal due to method employed by contractor. An exact measurement of the bentonite could not be made.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-58D

Date	Time	Depth	Casing	Stab. Time
11/30/93	1000	9.4'	10'	
11/30/93	1110	8.1'		
12/6/93	0810	7.66'		

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. MW-59D

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists						ENVIRITE THOMASTON, CONNECTICUT			Boring No. MW-59D Page 2 of 2 File No. 41182 Chkd. By: RPM				
27 Naek Road Vernon, Connecticut 06066 (203) 875-7655													
Boring Co. KENNEDY AND SONS						Casing	Sampler	Groundwater Readings					
Foreman	Bill Kennedy					Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	Thomas Loto/ Valerie Roe					I.D./O.D.	4-1/4"	2" O.D.	12/3/93	1230	9.14'		
Date Start	12/1/93		End 12/3/93		Hammer Wt.	300 LB.	140 LB.	12/3/93	1320	9.115'			
Location	See Plan					Hammer Fall	30"	30"	12/3/93	1430	9.115'		
GS.Elev.	Datum					Other			12/6/93	0800	7.97'		
D P T H	C B S L N W G S	No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data	Sample Description & Classification	Stratum Description	R M K S	Equipment Installed			
		S-6	24/4	40-42	5-5	ND	Medium dense, light-brown, fine to coarse SAND, little fine Gravel (Rock fragments), trace Silt	FINE TO COARSE SAND	1.				
45		S-7	24/24	45-47	8-5	ND	Medium dense, light-brown, fine to coarse SAND, trace fine Gravel and Silt						
50		S-8	6/6	50-52	37-50/0"	ND	Very dense, fine to coarse SAND, trace fine to coarse Gravel, trace Silt, 1" weathered Rock and clayish Silt	51' END OF EXPLORATION (REFUSAL)					
55													
60													
65													
Remarks: 1. Performed field screening on soil samples with a portable HNu (PID). ND indicates None Detected. 2. Stratum description for top 20 feet based on nearby boring MW-59S.													
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.													
Boring No. MW-59D													

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. MW-60 Page 1 of 1 File No. 41182 Chkd. By: RPM				
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Boring Co. KENNEDY AND SONS			<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>				
Foreman	Bill Kennedy		Type	HSA	S.S.		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	Thomas Loto/ Valerie Roe		I.D./O.D.	4-1/4"	2" O.D.		11/30/93	1300	7.4'	10'	
			Hammer Wt.	300 LB.	140 LB.		11/30/93	1315	7.0'	10'	
Date Start	11/30/93	End	11/30/93	Hammer Fall	30"	30"	12/6/93	0815	6.6'		
Location	See Plan		Other								
GS.Elev.	Datum										

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		S-1	24/18	0-2	5-8	ND	Top 3": PAVEMENT Bottom 18": Medium dense, light brown to brown, fine SAND, trace Silt, little (-) fine Gravel	PAVEMENT 0.25'	1.	
10		S-2	24/20	5-7	2-2	ND	Loose, light brown to brown, fine SAND, trace Silt	SAND AND GRAVEL		
					2-2					
15		S-3	24/6	7-9	12-20	ND	Dense, light brown, fine to coarse GRAVEL (Rock fragments), trace (+) fine to coarse Sand, trace Silt			
					29-21					
20		S-4	24/6	9-11	19-12	ND	Medium dense, light-brown, coarse to medium GRAVEL, trace (+) fine to coarse Sand, trace Silt			
					9-13					
25		S-5	24/14	11-13	13-12	ND	Medium dense, light-brown, coarse to medium GRAVEL, little (-) fine to coarse Sand, trace Silt			
					10-14					
30		S-6	12/0	13-14	8-9	ND	No sample	14.0'		
35								END OF EXPLORATION		

Remarks
 1. Performed field screening on soil samples with a portable HNu (PID); ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **MW-60**

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040	PROJECT/LOCATION	BORING NO. <u>MW-61B</u> SHEET <u>1</u> OF <u>2</u> JOB. NO. <u>91-580</u>
	Envirite Corp.	
	Thomaston, Connecticut	

DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>S. Rochelt</u>	BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>04/21/93</u> DATE FINISHED <u>04/23/93</u>
--	---

DRILLING METHOD <u>Spin Casing</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>	WATER LEVEL MEASUREMENTS																
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:25%;">DATE</th> <th style="width:25%;">MS. PT.</th> <th style="width:25%;">WATER AT</th> <th style="width:25%;">HR AFTER COMPLETION</th> </tr> <tr> <td>04/28/93</td> <td>Ground</td> <td>10.10</td> <td>120.0</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	DATE	MS. PT.	WATER AT	HR AFTER COMPLETION	04/28/93	Ground	10.10	120.0								
DATE	MS. PT.	WATER AT	HR AFTER COMPLETION														
04/28/93	Ground	10.10	120.0														

DEPTH (FT)	CASING BLOWER	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
							No samples taken 0 to 12 feet.			
12.0			12-14	24/8	6 7 6 8	Loose	SAND, F-C, dark yellowish brown, damp.		0 ppm	12.0
14.0			14-16	24/0	23 18 14 12	Medium	No recovery.			14.0
16.0			16-18	24/10	5 7 13 12	Medium	SAND, F-VC; trace F-M subangular gravel; moderate brown.		0 ppm	16.0
18.0			18-20	24/10	4 5 6 8		Same as above.		0 ppm	18.0
20.0			20-22	24/8			Same as above with laminations visible 4 to 5 inches from bottom of spoon and last 2 inches of spoon lighter color and		0 ppm	20.0
22.0							coarser.			22.0
24.0			24-26	24/4	14 16 22 24	Medium	SAND, F-VC; coarser gravel than above.		0 ppm	24.0
26.0										26.0
28.0			29-31	24/2	36 26	Medium	Same as above. Driller claims change of material at 31 feet.		0 ppm	28.0
30.0					18 14					30.0
32.0										32.0
34.0										34.0
36.0										36.0

PROPORTIONS USED	BORING METHOD	DEPTH	REMARKS:
TRACE 0 TO 10%	Spin Casing	0 - 50	FIELD INSTRUMENT= OVM 0.010" PVC Screen set 59 to 69 ft. Bentonite Chips 52 to 58.6 ft. Grout to 3 ft. Rock seal at 58.5 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.
LITTLE 10 TO 20%			
SOME 20 TO 35%			
AND 35 TO 50%			
perfil/wellog04			BORING NO. MW-61B

[illegible]

FUSS & ONEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040			ROCK CORE LOG			BORING NO. MW-61B			
			PROJECT: Ervrite Corp.			SHEET 1 OF 1			
			LOCATION: Thomaston, Ct			JOB NO. 91-580			
DRILLING CO.: Arbor Drilling			DATE STARTED: 4/22/93			DATE FINISHED: 4/22/93			
DRILLER: Dave Kowaleski			GROUND ELEVATION:						
CORING METHOD: NQ Core Barrel/Roller Bit			CORE DIAMETER: 2"						
FUSS & O'NEILL REPRESENTATIVE: R. Kovach									
DEPTH	COMMENTS	CORE RUN LENGTH AND RECOVERY(%)	CORE LOSS ZONE	DISCONTINUITIES			LITHOLOGY		GRAPHIC LOG
	TEST INSTRUMENTATION CORING RATE AND SMOOTHNESS CORING FLUID LOSS			RQD	FRACTURES PER FOOT	DESCRIPTION TIGHTNESS SPACING PLANARITY SMOOTHNESS FILLING	ORIENTATION ALTERATION STAINING WEATHERING STRUCTURE	MINERALOGY CLASSIFICATION COLOR GRAIN SIZE ALTERATION FORMATION NAME	
54	Average coring rate 6.5 min/ft. Smooth coring except for chatter at 59 feet. Slight water loss at 59 feet	7.6 100%		97%	1 1 3 0		Tight to very tight fractures, semiplanar, 10-30 degree dips, close to moderately close spacing. Smooth to rough surfaces. No alterations. Fresh weathering. 58.8-58.9': Very loose fractures, planar to nonplanar, intersecting	Quartz, plagioclase, biotite, gneiss. Light to very light gray (N7 - N8), biotite bands olive gray to olive black (5Y 4/5 - 5Y 2/1), fine to medium grained. No alterations.	
							dips approximately 30-40 degrees, very close spacing. No alterations or filling. Fresh weathering. Biotite-rich fracture area tended to flake away as mica flecks or plates. 59.1': Tight fracture, semiplanar, 5 degree dip, rough surface. fresh		
							weathering. No alteration or filling.		
61.6	Average coring rate 6.5 min/ft. Smooth coring	7.1 100%		96%	1 3 2 0		Tight fractures, planar to semiplanar, 1-30 degree dips, close to moderately close spacing. Smooth to rough surfaces. No alterations or filling. Fresh weathering.	61.6-68.4': Same as above. 68.4': Biotite, quartz, plagioclase, gneiss, schist. Olive black (5Y 2/1) with dark greenish gray (5GY 4/1 - 5G 4/1) zones. Medium to hard. Fresh weathering. Biotite laminations.	
68.7									
	perfill/r-core3								

FUSS & O'NEILL, INC.
CONSULTING
ENGINEERS

PROJECT/LOCATION

BORING NO.: MW-61B

Envirote Corp.

SHEET 1 OF 1

Thomaston, Connecticut

JOB NO.: 91-580

DEERES ROCK QUALITY DESIGNATIONS

[illegible]

perfil\rqdlmstr

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Enviro Corporation**

Monitoring Point I.D. No.: **MW-61B**

Date of Completion: **4/23/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Well Construction Method: **4" Casing, Roller Bit**

S. Rochet/R. Kovach

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **69 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **59 to 69 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **61 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Well Casing Material and Schedule:
Schedule 40 PVC
Method of Well Development:

Impermeable Backfill:
Bentonite Chips
Estimated K Screened Interval:

Locking **X** or Threaded Cap

Time Spent Developing:

Impermeable Backfill:
Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **7.6, 8.1 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **52 to 58.6 ft.**

O-ring Seals: Yes: ☒ No: ☐

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

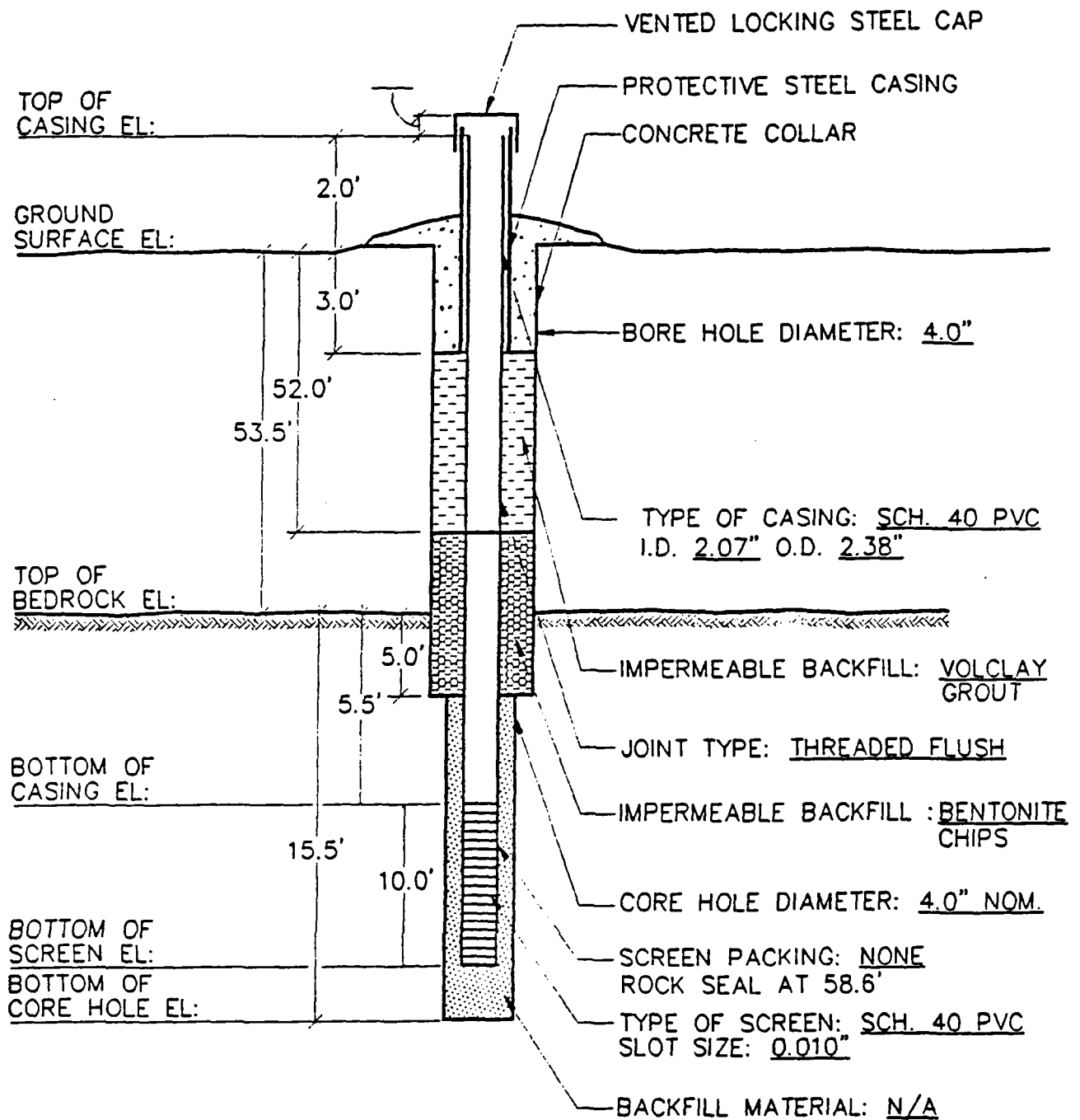
Inferred Relationship to Plume; Within ☒ Outside Edge

Watershed (Plume Discharge Watercourse): **Branch Brook**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.L.J. and G.4.

WELL NO. MW-61B



FUSS & O'NEILL
consulting engineers

1000 WILLOW ROAD, HARTFORD, CONNECTICUT 06103
(203) 226-7240

WELL CONSTRUCTION DETAILS
MW-61B

ENVIRITE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W61B.DWG

FUSS & O'NEILL, INC.
CONSULTING ENGINEERS
MANCHESTER, CT 06040

PROJECT/LOCATION

Envirite Corp.

Thomaston, Connecticut

BORING
SHEET
JOB. N

DRILLING CO. Arbor Drilling
 DRILLER Dave Kowaleski
 FUSS & O'NEILL REPRESENTATIVE R. Kovach

BORING LOCATION _____
 GROUND ELEVATION _____
 DATE STARTED 04/27/93 DA _____

DRILLING METHOD Spin Casing
 SAMPLING METHOD Split Spoon
 HAMMER WT. 140 lbs HAMMER FALL (IN) 30

WATER LEVEL MEASUREMENT

DATE	MS. PT.	WATER
04/28/93	PVC	15.47

DEPTH HIDE FT.	CASING HIDE FT.	SAMPLE					SAMPLE DESCRIPTION
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY	
							No samples taken 0 to 43 feet.
43.0		S-1	43-45	24/10	4 7 8 7	Medium	SAND, F; little M; trace silt; trace C and F gravel; dark yellowish brown, wet.
44.0							
45.0		S-2	45-47	24/16	5 6 12 12	Medium	45-46": Same as above, except little silt. 46-47": SAND, F-M; trace to little C; little silt; little F gravel
46.0							weathered rock fragment; dark yellowish brown.
47.0		S-3	47-49	24/14	6 8 9 11	Medium	SAND, F; little to some silt; micaceous; dark yellowish brown.
48.0							
49.0		S-4	49-51	24/17	5 5 8 8	Medium	SAND, F; trace M; trace to little silt; micaceous; dark yellowish brown.
50.0							
51.0		S-5	51-52	9/9	5 68 (37)		51-51.7": Same as above. 51.7": Split spoon refusal.
52.0							52.5": BEDROCK.
53.0							

PROPORTIONS USED BORING METHOD DEPTH

TRACE 0 TO 10%
 LITTLE 10 TO 20%
 SOME 20 TO 35%
 AND 35 TO 50%

perfill/wellog04

Spin Casing (6")

Spin Casing (4")

0 - 11

0 - 52

REMARKS:

FIELD INSTRUMENT= OVM Mode

0.010" PVC Screen set 42 to 52 ft.
 #1 Merie Silica Sand 39.5 to 52 ft.
 Bentonite Chips 37 to 39.5 ft.
 Volclay Grout 2 to 37 ft.

NOTE: Geologic Log Based on Proc
 Described in ASTM Standards

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Ervrite Corporation**

Monitoring Point I.D. No.: **MW-61D**

Date of Completion: **4/27/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Robert Kovach

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **52 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes ☒ No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **42 to 52 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **44 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes ☐ No ☒

Screen Packing: Yes ☒ No:

If Yes, Thickness: **12.5 ft.**

Well Inside Diameter: **2.07"**

Material: **More Silica Sand**

Grain Size: **#1**

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

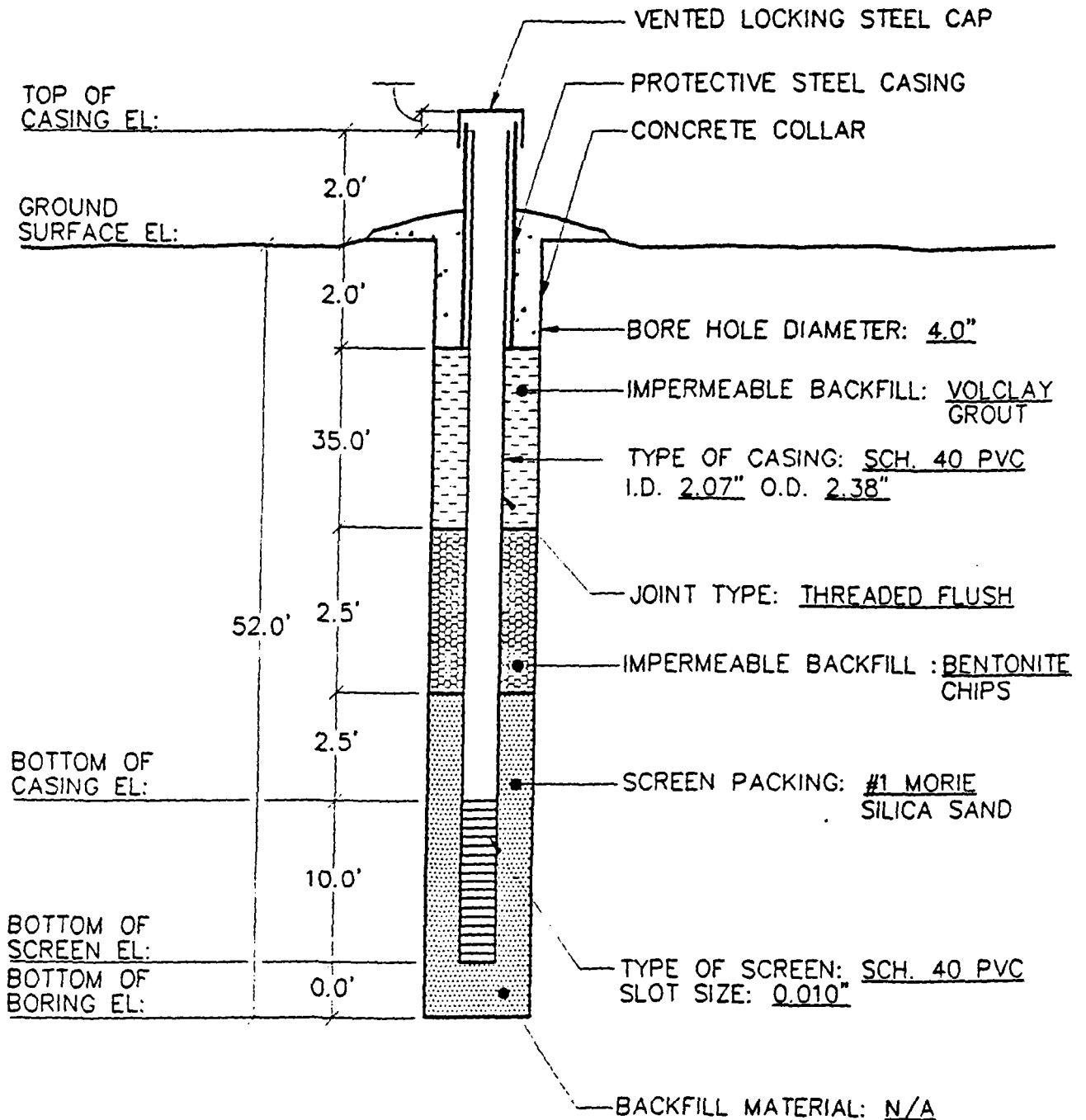
Time Spent Developing:

Locking ☒ or Threaded Cap

Impermeable Backfill:

Volclay Grout

WELL NO. MW-61D



FUSS & O'NEILL
consulting engineers
140 HARTFORD ROAD, WINDHAM, CONNECTICUT 06094
(203) 446-7469

WELL CONSTRUCTION DETAILS
MW-61D

ENVIRTE CORPORATION

FILENAME: MW61D.DWG

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040		PROJECT/LOCATION		BORING NO. <u>MW-61D</u> SHEET <u>1</u> OF <u>1</u> JOB. NO. <u>91-580</u>	
		Envirite Corp.			
		Thomaston, Connecticut			

DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>				BORING LOCATION _____ GROUND ELEVATION _____ DATE STARTED <u>04/27/93</u> DATE FINISHED <u>04/27/93</u>			
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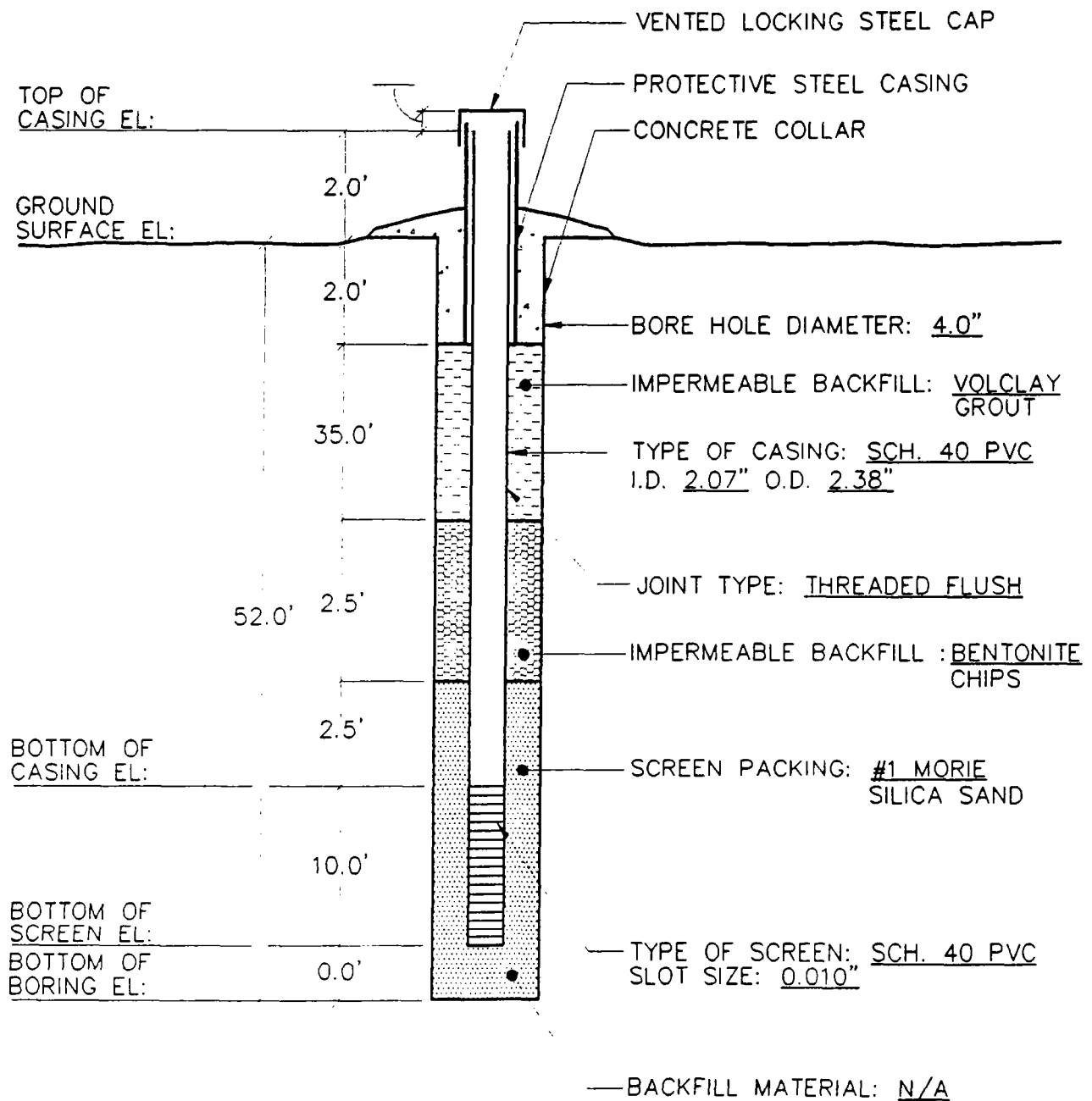
DRILLING METHOD <u>Spin Casing</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>				WATER LEVEL MEASUREMENTS			
				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION
				04/28/93	PVC	15.47	24.0

DEPTH (FT.)	CASING blow/sft	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
							No samples taken 0 to 43 feet.			
43.0		S-1	43-45	24/10	4 7 8 7	Medium	SAND, F; little M; trace silt; trace C and F gravel; dark yellowish brown, wet.	SP	0.4 ppm	43.0
44.0										44.0
45.0		S-2	45-47	24/16	5 6 12 12	Medium	45-46': Same as above, except little silt. 46-47': SAND, F-M; trace to little C; little silt; little F gravel and	SP-SM	0.4 ppm	45.0
46.0							weathered rock fragment; dark yellowish brown.			46.0
47.0		S-3	47-49	24/14	6 8 9 11	Medium	SAND, F; little to some silt; micaceous; dark yellowish brown.	SM	0.4 ppm	47.0
48.0										48.0
49.0		S-4	49-51	24/17	5 5 8 8	Medium	SAND, F; trace M; trace to little silt; micaceous; dark yellowish brown.	SP-SM	0.2 ppm	49.0
50.0										50.0
51.0		S-5	51-52	9/9	5 68 (3")		51-51.7': Same as above. 51.7': Split spoon refusal.	SP-SM		51.0
52.0							52.5': BEDROCK.			52.0
53.0										53.0

PROPORTIONS USED TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50% perfill/wellog04	BORING METHOD Spin Casing (6") Spin Casing (4") 	DEPTH 0 - 11 0 - 52 	REMARKS: FIELD INSTRUMENT= OVM Model 580B 0.010" PVC Screen set 42 to 52 ft. #1 Morie Silica Sand 39.5 to 52 ft. Bentonite Chips 37 to 39.5 ft. Volclay Grout 2 to 37 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.
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BORING NO.
MW-61D

WELL NO. MW-61D



FUSS & O'NEILL
consulting engineers

141 NORTH RD. HARTFORD, CONNECTICUT 06106
(203) 244-5449

WELL CONSTRUCTION DETAILS
MW-61D

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: MW61D.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-61D**

Date of Completion: **4/27/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Robert Kovach

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **52 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes ☒ No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **42 to 52 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **44 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes ☐ No ☒

Screen Packing: Yes ☒ No:

If Yes, Thickness: **12.5 ft.**

Well Inside Diameter: **2.07"**

Material: **Morie Silica Sand**

Grain Size: **#1**

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing:

Locking ☒ or Threaded Cap

Impermeable Backfill:

Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length: **N/A**

Water-Bearing Rock Unit: **N/A**

Water-Bearing Sections (Depths and Approximate Yields): **N/A**

Length of Rock Cores: **N/A**

Diameter of Core Hole: **N/A**

Thickness and Depth of Impermeable Backfill: **N/A**

O-ring Seals: Yes: No:

GEOLOGIC INFORMATION

Aquifer: **Overburden**

Inferred Relationship to Plume; Within **X** Outside Edge

Watershed (Plume Discharge Watercourse): **Branch Brook**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

FUSS & O'NEILL, INC.
CONSULTING ENGINEERS
MANCHESTER, CT 06040

PROJECT/LOCATION

Envirite Corp.

Thomaston, Connecticut

BORING NO. MW-61S

SHEET 1 OF 1

JOB. NO. 91-580

DRILLING CO. Arbor Drilling
 DRILLER Dave Kowaleski
 FUSS & O'NEILL REPRESENTATIVE R. Kovach

BORING LOCATION _____
 GROUND ELEVATION _____
 DATE STARTED 04/06/93 DATE FINISHED 04/28/93

DRILLING METHOD Spin Casing / NQ Core
 SAMPLING METHOD Split Spoon
 HAMMER WT. 140 lbs HAMMER FALL (IN) 30

WATER LEVEL MEASUREMENTS

DATE	MS. PT.	WATER AT	HR AFTER COMPLETION
04/06/93	Ground	13.20	
04/29/93	Ground	13.00	

DEPTH (FT.)	CASSING Blows/ft	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
0.0							No samples taken 0 to 11 feet. Boulders. Casing driven through boulders with cable tool apparatus.			0.0
2.0										2.0
4.0										4.0
6.0										6.0
8.0										8.0
10.0		S-1	11-13	24/18	7 30		11-12': SAND, F-M; trace C; little silt; dark yellowish brown to olive gray, moist.		0 ppm	10.0
12.0					40 28		12-13': SAND, VC-M; little F; little to some M-C gravel; dark yellowish brown to dusky yellowish brown.			12.0
14.0		S-2	15-17	24/12	16 16		15-15.2': Same as above.		0.4 ppm	14.0
16.0					12 14		15.2-17': SAND, F-M; trace granules and F gravel; trace silt; dark yellowish brown.			16.0
18.0										18.0
20.0		S-3	20-22	24/16	4 8 6 9		SAND, F-M; trace to little silt; trace C and granules; trace F gravel; moderate yellowish brown.		1 ppm	20.0
22.0							23-24': Gravelly.			22.0
24.0		S-4	25-27	24/12	10 58		SAND, F-M; trace VC-F; trace to little granules and schist fragments; moderate yellowish brown to dark yellowish brown.		0.4 ppm	24.0
26.0					23 15		27': Roller bit and 1 foot rod section broke off in borehole. Top of rod section at 25.8 feet.			26.0
28.0										28.0

PROPORTIONS USED	BORING METHOD	DEPTH
TRACE 0 TO 10%	Spin Casing	0 - 25
LITTLE 10 TO 20%	Split Spoon	25 - 27
SOME 20 TO 35%		
AND 35 TO 50%		
perfill/wellog04		

REMARKS:

FIELD INSTRUMENT = OVM Model 5808
 0.010" PVC Screen set 14 to 20 ft.
 #1 Molar Silica Sand 12 to 20 ft.
 Bentonite Chips 9.5 to 12 ft.
 Grout to 9.5 ft.

NOTE: Geologic Log Based on Procedures
 Described in ASTM Standard D 2488.

BORING NO.
 MW-61S

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-61S**

Date of Completion: **4/28/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Robert Kovach

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **20 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No: **X**

Top of PVC Casing Elevation (MSL):

Screened Interval: **14 to 20 ft.** :

Length of Screen: **6 ft.**

Length of Riser Pipe: **16 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes **X** No:

If Yes, Thickness: **12 ft.**

Well Inside Diameter: **2.07"**

Material: **Monie Silica Sand**

Grain Size: **#1**

Well Casing Material and Schedule:

Impermeable Backfill:

Bentonite Chips

Schedule 40 PVC
Method of Well Development:

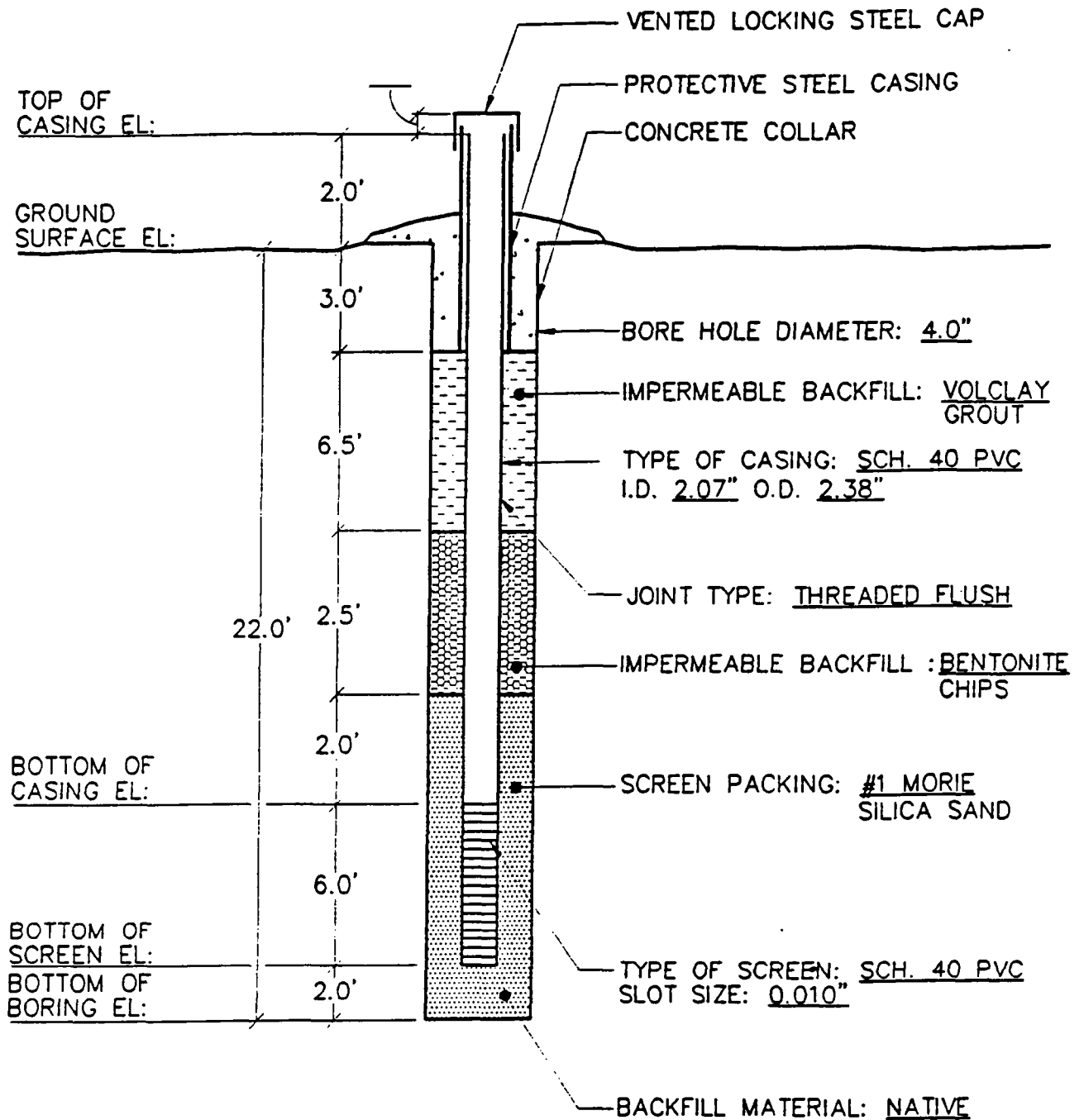
Estimated K Screened Interval:

Time Spent Developing:

Locking **X** or Threaded Cap

Impermeable Backfill:

Volclay Grout



FUSS & O'NEILL
consulting engineers
144 HARTFORD ROAD, WINDHAM, CONNECTICUT 06095
(203) 444-2469

WELL CONSTRUCTION DETAILS
MW-61S

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S

FILENAME: MW61S.DWG

FUSS & O'NEILL, INC.
CONSULTING ENGINEERS
MANCHESTER, CT 06040

PROJECT/LOCATION

Envirite Corp.

Thomaston, Connecticut

BORING NO. MW-61B

SHEET 1 OF 2

JOB. NO. 91-580

DRILLING CO. Arbor Drilling
 DRILLER Dave Kowaleski
 FUSS & O'NEILL REPRESENTATIVE S. Rochelt

BORING LOCATION _____
 GROUND ELEVATION _____
 DATE STARTED 04/21/93 DATE FINISHED 04/23/93

DRILLING METHOD Spin Casing
 SAMPLING METHOD Split Spoon
 HAMMER WT. 140 lbs HAMMER FALL (IN) 30

WATER LEVEL MEASUREMENTS

DATE	MS. PT.	WATER AT	HR AFTER COMPLETION
04/28/93	Ground	10.10	120.0

DEPTH (FT.)	CASING BLOW/FT	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
							No samples taken 0 to 12 feet.			
12.0			12-14	24/8	6 7 6 8	Loose	SAND, F-C, dark yellowish brown, damp.		0 ppm	12.0
14.0			14-16	24/0	23 18 14 12	Medium	No recovery.			14.0
16.0			16-18	24/10	5 7 13 12	Medium	SAND, F-VC; trace F-M subangular gravel; moderate brown.		0 ppm	16.0
18.0			18-20	24/10	4 5 6 8		Same as above.		0 ppm	18.0
20.0			20-22	24/8			Same as above with laminations visible 4 to 5 inches from bottom of spoon and last 2 inches of spoon lighter color and		0 ppm	20.0
22.0							coarser.			22.0
24.0			24-26	24/4	14 16 22 24	Medium	SAND, F-VC; coarser gravel than above.		0 ppm	24.0
26.0										26.0
28.0			29-31	24/2	36 26 18 14	Medium	Same as above. Driller claims change of material at 31 feet.		0 ppm	28.0
30.0										30.0
32.0										32.0
34.0										34.0
36.0										36.0

PROPORTIONS USED

TRACE 0 TO 10%
 LITTLE 10 TO 20%
 SOME 20 TO 35%
 AND 35 TO 50%

perfill/wellog04

BORING METHOD

Spin Casing

DEPTH

0 - 50

REMARKS:

FIELD INSTRUMENT = OVM
 0.010" PVC Screen set 59 to 69 ft.
 Bentonite Chips 52 to 58.6 ft.
 Grout to 3 ft.
 Rock seal at 58.5 ft.

NOTE: Geologic Log Based on Procedures
 Described in ASTM Standard D 2488.

BORING NO.
 MW-61B

[illegible]

FUSS & O'NEILL, INC.
CONSULTING
ENGINEERS

PROJECT/LOCATION

BORING NO.: MW-61B

Envirite Corp.

SHEET 1 OF 1

Thomaston, Connecticut

JOB NO.: 91-580

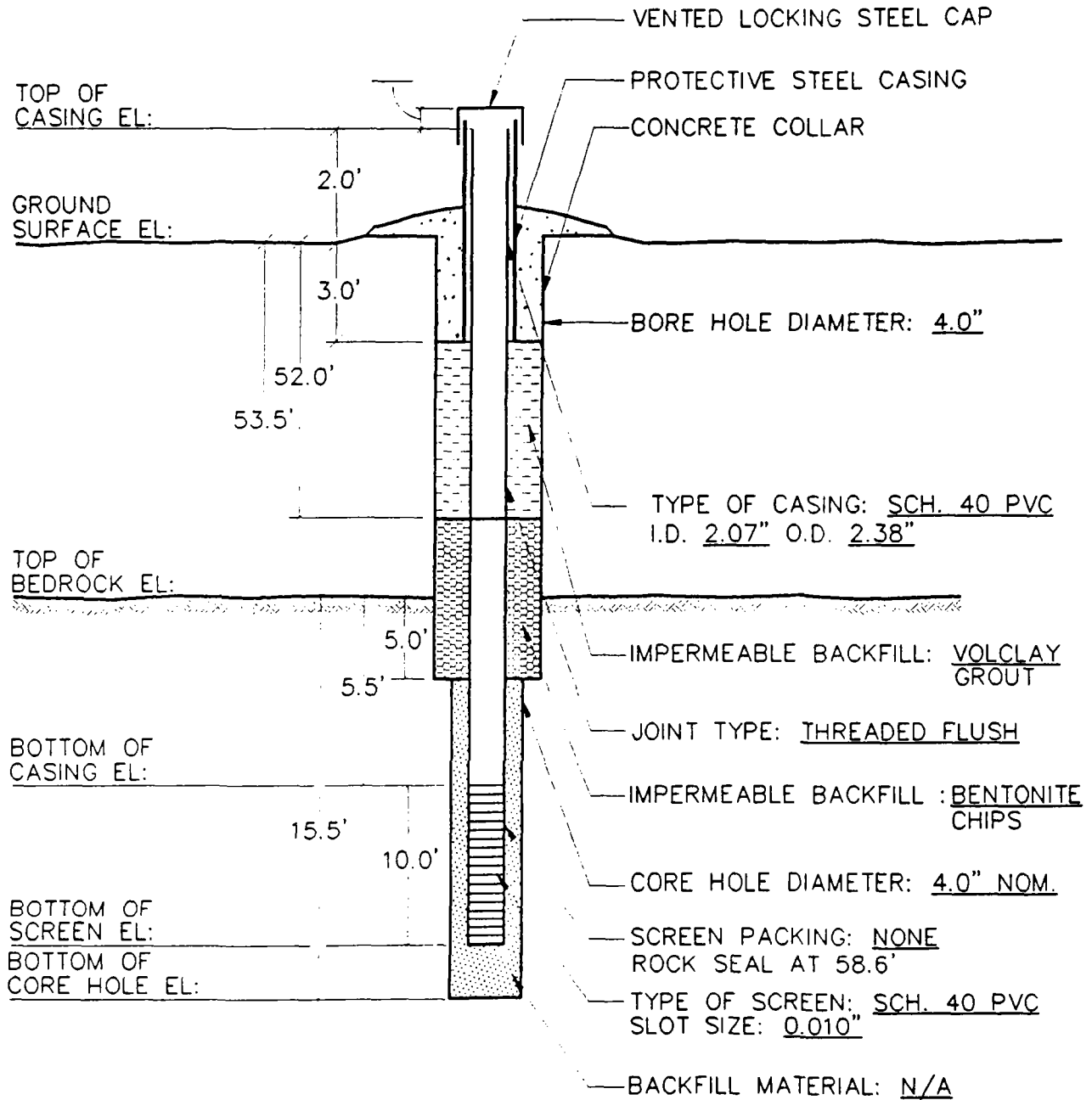
DEERES ROCK QUALITY DESIGNATIONS

RUN NO.	RUN LENGTH (FT.)	RECOVERY LENGTH (FT.)	SUM LENGTH OF CORE PIECES >.328 ft. (100mm)	RQD(%) SUM LENGTH OF CORE 100 x PIECES > .328' / RUN LENGTH	% RECOVERY RECOVERY LENGTH/ 100 x RUN LENGTH
1	7.6	7.6	7.4	97%	100%
2	7.1	7.1	6.8	96%	100%

perfill/rqdlmstr

FUSS & ONEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040				ROCK CORE LOG				BORING NO. MW-61B SHEET 1 OF 1 JOB NO. 91-580			
				PROJECT: Envirite Corp.							
				LOCATION: Thomaston, Ct							
DRILLING CO.: Arbor Drilling				DATE STARTED: 4/22/93				DATE FINISHED: 4/22/93			
DRILLER: Dave Kowaleski				GROUND ELEVATION:							
CORING METHOD: NQ Core Borell/Roller Bit				CORE DIAMETER: 2"							
FUSS & O'NEILL REPRESENTATIVE: R. Kovach											
DEPTH	COMMENTS	CORE RUN LENGTH AND RECOVERY(%)	CORE LOSS ZONE	DISCONTINUITIES			LITHOLOGY		GRAPHIC LOG		
	<small>ISS INFILTRATION CORING RATE AND SMOOTHNESS CORING FLUID LOSS</small>			<small>RQD</small> <small>FRACURES PER FOOT</small>	<small>DESCRIPTION TIGHTNESS SPACING PLANARITY SMOOTHNESS FILLING</small>	<small>ORIENTATION ALTERATION STAINING WEATHERING STRUCTURE</small>	<small>MINERALOGY CLASSIFICATION COLOR GRAIN SIZE ALTERATION FORMATION NAME</small>	<small>CEMENTATION HARDNESS WEATHERED STATE TEXTURE ORIENTATION SPACING</small>			
54	Average coring rate 6.5 min/ft. Smooth coring except for chatter at 59 feet. Slight water loss at 59 feet	7.6 100%		97%	1 1 3 0	Tight to very tight fractures, semiplanar, 10-30 degree dips, close to moderately close spacing. Smooth to rough surfaces. No alterations. Fresh weathering. 58.8-58.9': Very loose fractures, planar to nonplanar, intersecting		Quartz, plagioclase, biotite, gneiss. Light to very light gray (N7 - N8), biotite bands olive gray to olive black (5Y 4/5 - 5Y 2/1), fine to medium grained. No alterations.			
						dips approximately 30-40 degrees, very close spacing. No alterations or filling. Fresh weathering. Biotite-rich fracture area tended to flake away as mica flecks or plates. 59.1': Tight fracture, semiplanar, 5 degree dip, rough surface. fresh					
					1	weathering. No alteration or filling.					
61.6	Average coring rate 6.5 min/ft. Smooth coring	7.1 100%		96%	1 3 2 0	Tight fractures, planar to semiplanar, 1-30 degree dips, close to moderately close spacing. Smooth to rough surfaces. No alterations or filling. Fresh weathering.		61.6-68.4': Same as above. 68.4': Biotite, quartz, plagioclase, gneiss, schist. Olive black (5Y 2/1) with dark greenish gray (5GY 4/1 - 5G 4/1) zones. Medium to hard. Fresh weathering. Biotite laminations.			
68.7											
	perfill/r-core3										

WELL NO. MW-61B



FUSS & O'NEILL
consulting engineers

100 HARTFORD ROAD, HARTFORD, CONNECTICUT 06106
203.444-2446

WELL CONSTRUCTION DETAILS
MW-61B

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W61B.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-61B**

Date of Completion: **4/23/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

S. Rochelt/R. Kovach

Well Construction Method: **4" Casing, Roller Bit**

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **69 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **59 to 69 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **61 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing:

Locking **X** or Threaded Cap

Impermeable Backfill:

Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **7.6, 8.1 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **52 to 58.6 ft.**

O-ring Seals: Yes: ☒ No:

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

Inferred Relationship to Plume; Within ☒ Outside Edge

Watershed (Plume Discharge Watercourse): **Branch Brook**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040			PROJECT/LOCATION			BORING NO. <u>MW-62B</u>																																																																																																																																																																																																	
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DRILLING METHOD <u>Hollow Stem Auger</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>						WATER LEVEL MEASUREMENTS <table border="1"> <thead> <tr> <th>DATE</th> <th>MS. PT.</th> <th>WATER AT</th> <th>HR AFTER COMPLETION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			DATE	MS. PT.	WATER AT	HR AFTER COMPLETION																																																																																																																																																																																											
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FUSS & ONEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040						ROCK CORE LOG								BORING NO. MW-62B SHEET 1 OF 1 JOB NO. 91-580			
PROJECT:						Enviro Corp.											
LOCATION:						Thomaston, Ct											
DRILLING CO.: Arbor Drilling						DATE STARTED: 2/22/93						DATE FINISHED: 2/22/93					
DRILLER: Dave Kowaleski						GROUND ELEVATION:											
CORING METHOD: NX Core						CORE DIAMETER: 1.7"											
FUSS & O'NEILL REPRESENTATIVE: John Brogden																	
DEPTH	COMMENTS		CORE RUN LENGTH AND RECOVERY(%)	CORE LOSS ZONE	DISCONTINUITIES			LITHOLOGY				CHART NO. LOG					
	TEST DESCRIPTION CORING RATE AND SMOOTHNESS CORING FLUID LOSS				RQD	FRACTURE FREQUENCY	DESCRIPTION TIGHTNESS SPACING PLANARITY SMOOTHNESS FILING	ORIENTATION ALTERATION STAINING WEATHERING STRUCTURE	MINERALOGY CLASSIFICATION COLOR GRAIN SIZE ALTERATION FORMATION NAME	CEMENTATION HARDNESS WEATHERED STATE TEXTURE ORIENTATION SPACING							
25	Smooth coring. Little water loss. Average 5.3 min/ft.	9.5' 9.0' 95%	.5'	94%	2 1 0 0 0	Tight, close, semi planar, rough, fractures at 20 degrees. No filling, no staining, fresh weathering.	Biotite, plagioclase, quartz, schist, medium gray (N5), fine grained, no alteration, hard, freshly weathered. Very fine foliation or schistosity of minerals at 20 to 25 degrees.										
27						Very tight, moderately close, non planar, very rough breaks at 25 degrees, no filling or staining, fresh weathering.	Quartz, plagioclase, biotite, schist, alternating between light gray (N7) and dark gray (N3) with banding, fine to medium grained, no alteration, hard, freshly weathered.										
34.5	Smooth coring. Little water loss. Average of 7.5 min/ft.	2' 2.5' 125%		100 %	1	No discontinuities. Same as above.	Texture alternates between mica bands (1-5 mm) at 25 degrees and quartz plagioclase bands (1-20 mm) also at 25 degrees.										
36.5																	
	perfill/r-core3																

FUSS & O'NEILL, INC.
CONSULTING
ENGINEERS

PROJECT/LOCATION

BORING NO.: MW-52B

Enviroite Corp.

SHEET 1 OF 1

Thomaston, Connecticut

JOB NO.: 91-580

DEERES ROCK QUALITY DESIGNATIONS

[illegible]

perfil\rqdlmstr

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirte Corporation**

Monitoring Point I.D. No.: **MW-62B**

Date of Completion: **2/22/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Well Construction Method: **Hollow Stem Auger, 4" Casing and
Roller Bit**

D. Fontaine/J. Brogden

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **36 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **26 to 36 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **28 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing:

Locking **X** or Threaded Cap

Impermeable Backfill:

Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **9.5, 2 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **18.5 to 25.8 ft.**

O-ring Seals: Yes: ☒ No:

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

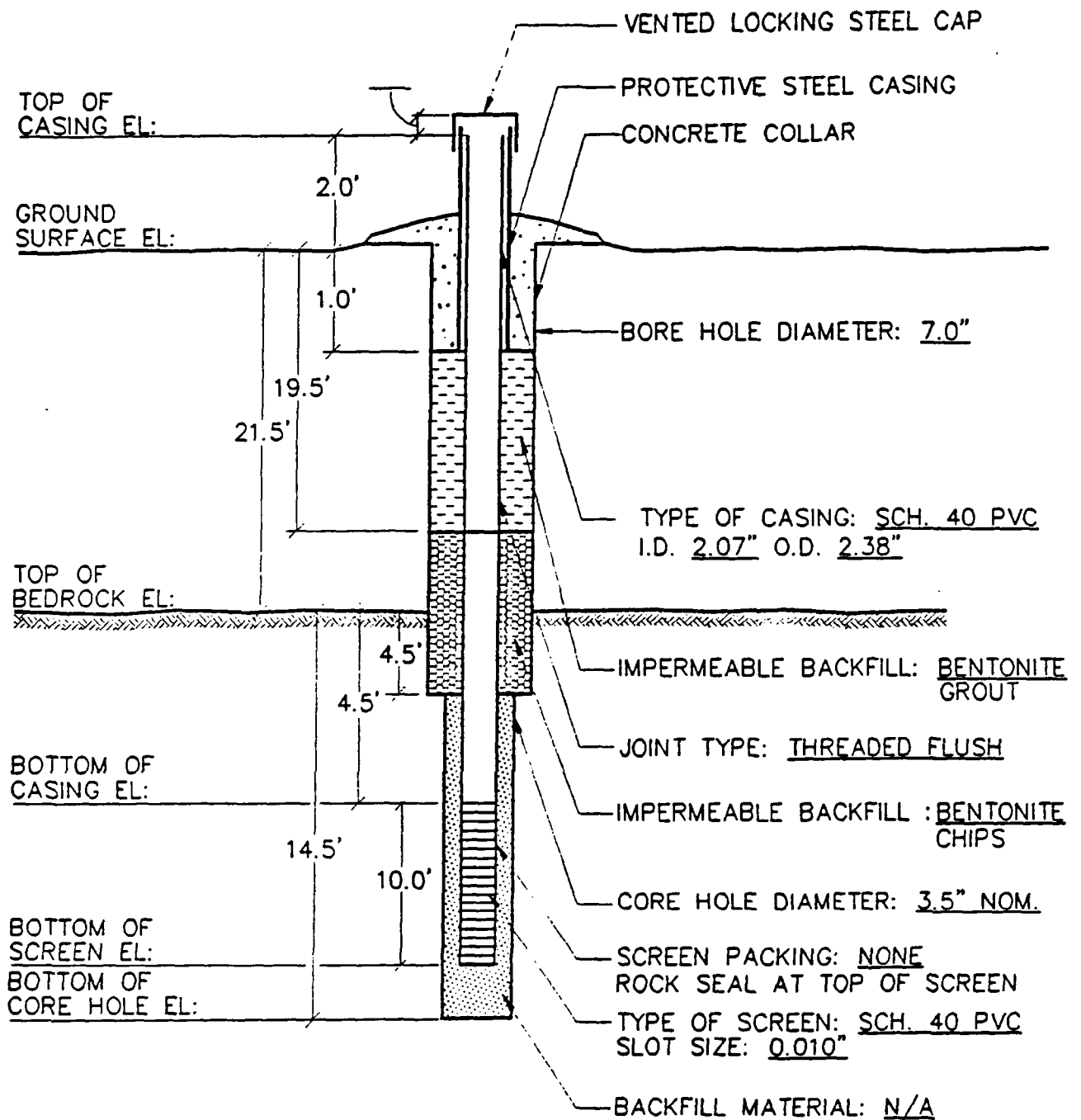
Inferred Relationship to Plume; Within ☒ Outside Edge

Watershed (Plume Discharge Watercourse): **Naugatuck River**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

WELL NO. MW-62B



FUSS & O'NEILL
consulting engineers
146 HARTFORD ROAD, WASHINGTON, CONNECTICUT 06040
(203) 448-2449

WELL CONSTRUCTION DETAILS
MW-62B

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: MW62B.DWG

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040		PROJECT/LOCATION		BORING NO. <u>MW-62S</u> SHEET <u>1</u> OF <u>2</u> JOB. NO. <u>91-580</u>			
		Envirite Corp.					
		Thomaston, Connecticut					
DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>Dave Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>J. Brogden</u>				BORING LOCATION <u>Adjacent to MW-62B</u> GROUND ELEVATION _____ DATE STARTED <u>02/23/93</u> DATE FINISHED <u>02/24/93</u>			
DRILLING METHOD <u>Hollow Stem Auger</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>				WATER LEVEL MEASUREMENTS			
				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION
				01/23/93	Ground	14.40	

DEPTH (FT)	CASING blower	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
0.0			0-10				SAND, F-M; trace C; trace F gravel; dusky yellowish brown (10YR 2/2), dry.	SP	-	0.0
1.0										1.0
2.0										2.0
3.0										3.0
4.0										4.0
5.0										5.0
6.0										6.0
7.0										7.0
8.0										8.0
9.0										9.0
10.0			10-12				SAND, F-M; trace F gravel; light brown (5YR 5/6), dry.	SP	-	10.0
11.0										11.0
12.0		S-1	12-14	24/6	76 52 57 62	Dense	SAND, M; trace F and C; some F-M angular to subangular gravel; light brown (5YR 5/6), wet. Till?	SP	0 ppm	12.0
13.0										13.0
14.0		S-2	14-16	24/12	32 34 26 21	Dense	SAND, M-C, angular; some F-M angular to subangular gravel; trace rock fragments; moderate brown (5YR 4/4), wet.	SP	1.7 ppm	14.0

PROPORTIONS USED		BORING METHOD	DEPTH	REMARKS: FIELD INSTRUMENT = OVM #3 0.010" PVC Screen set 19 to 21 ft. #1 Silica Sand 18 to 21 ft. Bentonite Chips 16 to 18 ft. Benotinte Grout 1 to 16 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.
TRACE 0 TO 10%		4.25" ID HSA	0 - 15	
LITTLE 10 TO 20%		4" OD Spin Casing	15 - 21	
SOME 20 TO 35%		Roller Bit	16 - 21	
AND 35 TO 50%				

perfil/wellog04

BORING NO.
MW-62S

[illegible]

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040	PROJECT/LOCATION	BORING NO. <u>MW-62B</u> SHEET <u>1</u> OF <u>1</u> JOB. NO. <u>91-580</u>
	Envirite Corp.	
	Thomaston, Connecticut	

DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>David Kowaleski</u> FUSS & O'NEILL REPRESENTATIVE <u>D. Fontaine</u>	BORING LOCATION <u>East of landfill</u> GROUND ELEVATION _____ DATE STARTED <u>02/19/93</u> DATE FINISHED <u>02/22/93</u>
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DRILLING METHOD <u>Hollow Stem Auger</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>	WATER LEVEL MEASUREMENTS																
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:25%;">DATE</th> <th style="width:15%;">MS. PT.</th> <th style="width:25%;">WATER AT</th> <th style="width:35%;">HR AFTER COMPLETION</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>	DATE	MS. PT.	WATER AT	HR AFTER COMPLETION												
DATE	MS. PT.	WATER AT	HR AFTER COMPLETION														

DEPTH (FT)	CASING DOWN	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
0.0			0-2	24/20	17 7		0-1.2': SAND, F; little C gravel. Frozen soil.		ND	0.0
					10 17		1.2-1.7': ROOTS, organics; dark yellowish brown (10YR 4/2).			
2.0							Thawed soil.			2.0
4.0										4.0
			5-7	24/18	2 1		SAND, F, moderate yellowish brown (10YR 5/4). Well sorted.		ND	
6.0					2 4		Immature.			6.0
8.0										8.0
10.0			10-12	24/14	4 6		SAND, M; little rounded to semi rounded M gravel; grayish orange (10YR 7/4).		ND	10.0
					14 23					
12.0							Cobble layer.			12.0
14.0										14.0
			15-17	24/16	34 26		Sand, M, and C, rounded gravel; little rounded cobble; mottled		ND	
16.0					40 44		color, wet.			16.0
18.0										18.0
20.0			20-22	24/8	18 60		SAND, C-F; rich biotite; little silt; little cobble; dusky yellowish brown (10YR 2/2).		ND	20.0
					100 (3")					
22.0							21': ROCK.			22.0
24.0										24.0

PROPORTIONS USED	BORING METHOD	DEPTH	REMARKS: FIELD INSTRUMENT= OVM calibrated to 98.5 ppm isobutylene Cold temperature may inhibit volatility. 0.010" PVC Screen set 26 to 36 ft. Rock Seal 25.8 ft. Bentonite Chips 18.5 to 25.8 ft. Bentonite Grout 0 to 18.5 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.
TRACE 0 TO 10%	7.8" OD HSA	0 - 15	
LITTLE 10 TO 20%	4" OD Spin Casing	15 - 21	
SOME 20 TO 35%	Roller Bit		
AND 35 TO 50%	NQ Core Barrel		
perfil/wellog04			BORING NO. MW-62B

FUSS & ONEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040				ROCK CORE LOG				BORING NO. MW-62B SHEET 1 OF 1 JOB NO. 91-580				
				PROJECT: Enviro Corp.								
				LOCATION: Thomaston, Ct								
DRILLING CO.: Arbor Drilling				DATE STARTED: 2/22/93				DATE FINISHED: 2/22/93				
DRILLER: Dave Kowaleski				GROUND ELEVATION:								
CORING METHOD: NX Core				CORE DIAMETER: 1.7"								
FUSS & O'NEILL REPRESENTATIVE: John Brogden												
DEPTH	COMMENTS	CORE RUN LENGTH AND RECOVERY(%)	CORE LOSS ZONE	DISCONTINUITIES				LITHOLOGY				GRAPHIC LOG
	TEST INSTRUMENTATION CORING RATE AND SMOOTHNESS CORING FLUID LOSS			RQD	FRACTURE PER FOOT	DESCRIPTION TIGHTNESS SPACING PLANARITY SMOOTHNESS FILLING	ORIENTATION ALTERATION STAINING WEATHERING STRUCTURE	MINERALOGY CLASSIFICATION COLOR GRAN SIZE ALTERATION FORMATION NAME	CEMENTATION HARDNESS WEATHERED STATE TEXTURE ORIENTATION SPACING			
26	Smooth coring. Little water loss. Average 5.3 min/ft.	9.5' 9.0' 95%	.5'	94%	2 1 0 0 0		Tight, close, semi planar, rough, fractures at 20 degrees. No filling, no staining, fresh weathering.		Biotite, plagioclase, quartz, schist, medium gray (N5), fine grained, no alteration, hard, freshly weathered. Very fine foliation or schistosity of minerals at 20 to 25 degrees.			
27							Very tight, moderately close, non planar, very rough breaks at 25 degrees, no filling or staining, fresh weathering.		Quartz, plagioclase, biotite, schist, alternating between light gray (N7) and dark gray (N3) with banding, fine to medium grained, no alteration, hard, freshly weathered.			
34.5	Smooth coring. Little water loss. Average of 7.5 min/ft.	2' 2.5' 125%		100%			No discontinuities. Same as above.		Texture alternates between mica bands (1-5 mm) at 25 degrees and quartz plagioclase bands (1-20 mm) also at 25 degrees.			
36.5												
perfill/r-core3												

FUSS & O'NEILL, INC.
CONSULTING
ENGINEERS

PROJECT/LOCATION

BORING NO.: MW-62B

Envirte Corp.

SHEET 1 OF 1

Thomaston, Connecticut

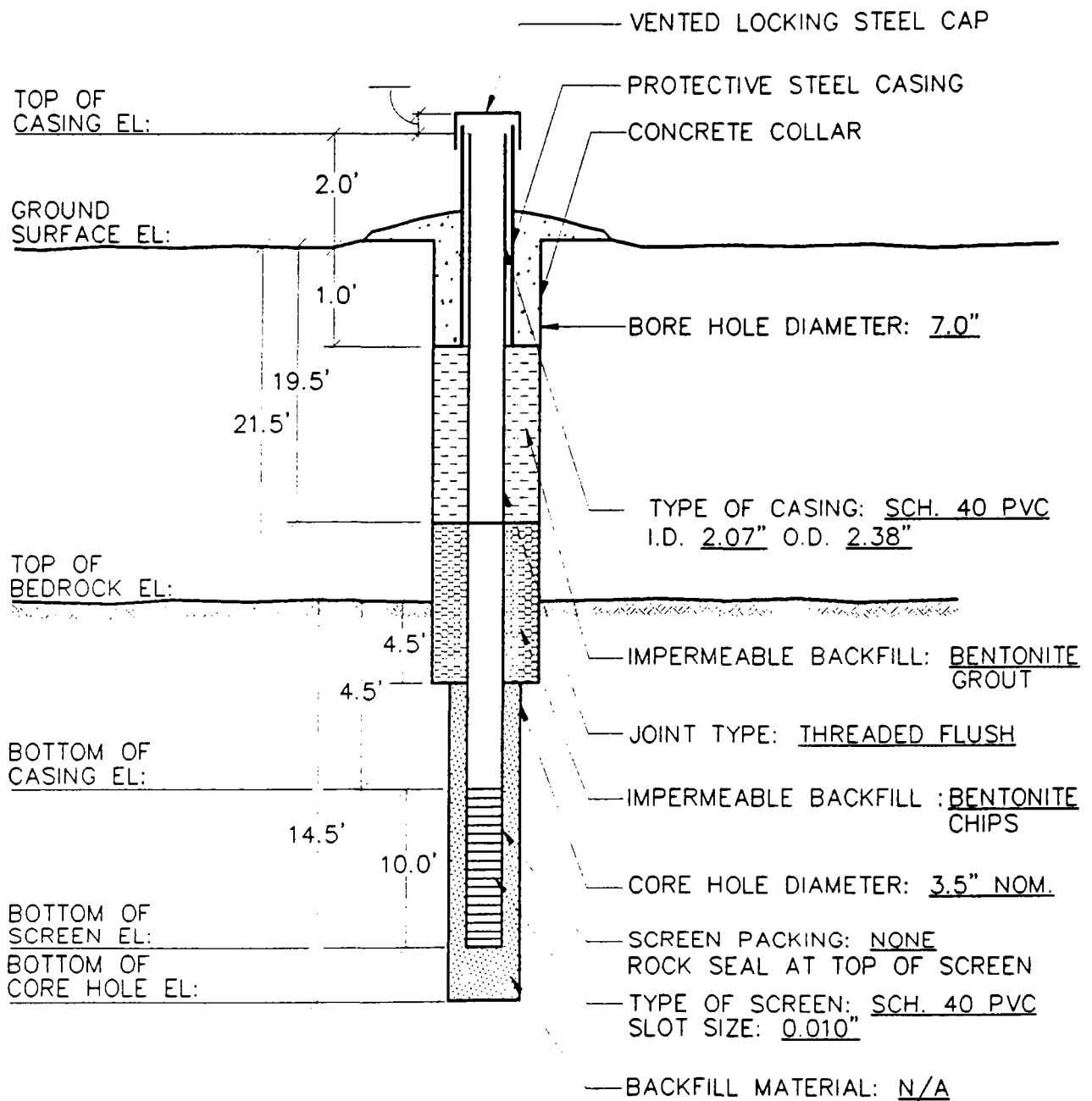
JOB NO.: 91-580

DEERES ROCK QUALITY DESIGNATIONS

[illegible]

perfil\rqdlmstr

WELL NO. MW-62B



FUSS & O'NEILL
consulting engineers

140 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
203-645-4400

WELL CONSTRUCTION DETAILS MW-62B ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W62B.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-62B**

Date of Completion: **2/22/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Well Construction Method: **Hollow Stem Auger, 4" Casing and
Roller Bit**

D. Fontaine/J. Brogden

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **36 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No:

Top of PVC Casing Elevation (MSL):

Screened Interval: **26 to 36 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **28 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes No: **X**

If Yes, Thickness:

Well Inside Diameter: **2.07"**

Material:

Grain Size:

Impermeable Backfill:

Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing:

Locking **X** or Threaded Cap

Impermeable Backfill:

Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length:

Water-Bearing Rock Unit: **Gneiss**

Water-Bearing Sections (Depths and Approximate Yields):

Length of Rock Cores: **9.5, 2 ft.**

Diameter of Core Hole: **4 in.**

Thickness and Depth of Impermeable Backfill: **18.5 to 25.8 ft.**

O-ring Seals: Yes: **X** No:

GEOLOGIC INFORMATION

Aquifer: **Shallow Bedrock**

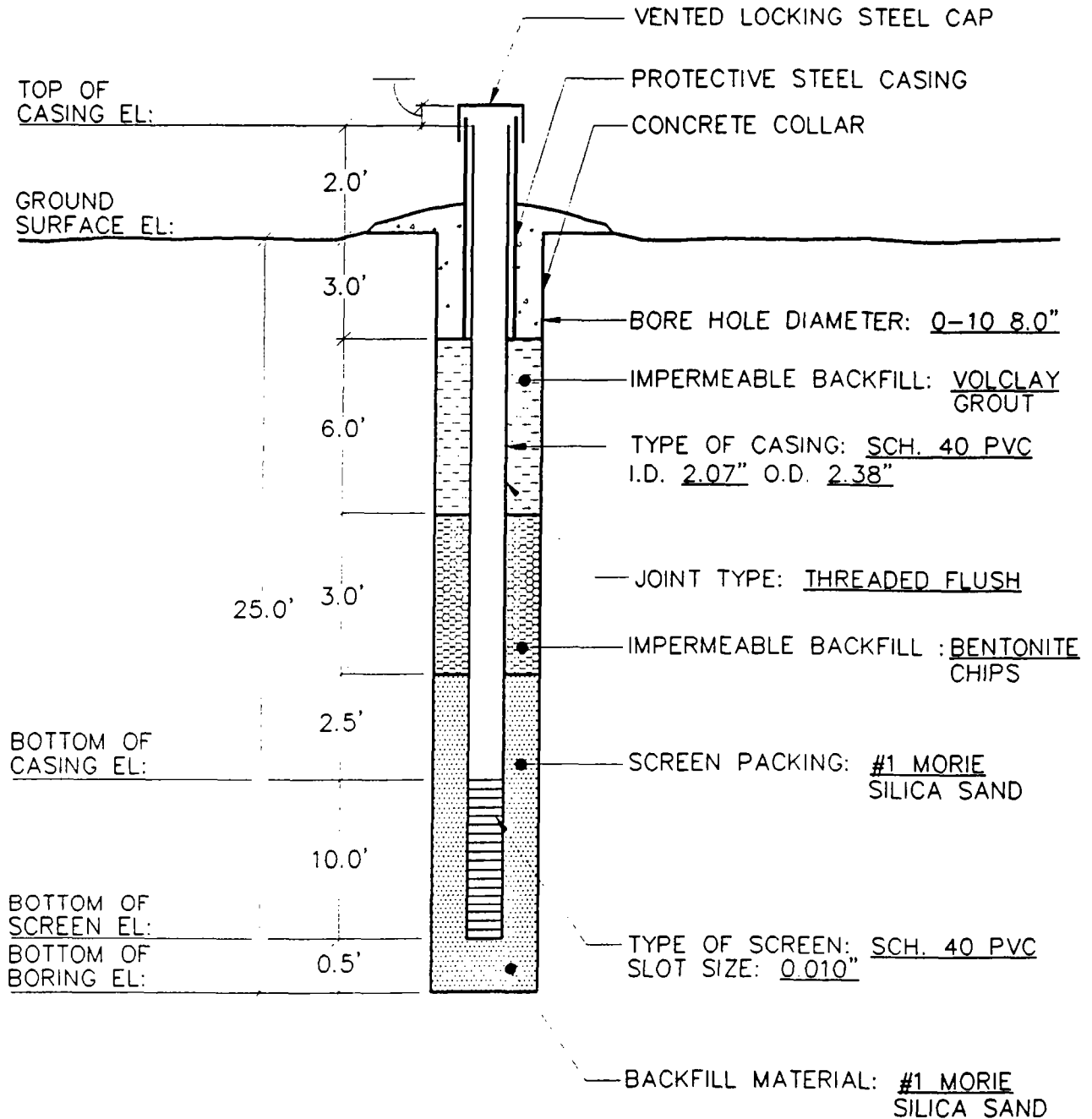
Inferred Relationship to Plume; Within **X** Outside Edge

Watershed (Plume Discharge Watercourse): **Naugatuck River**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

WELL NO. MW-63S



FUSS & O'NEILL
consulting engineers
147 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
203/666-5400

WELL CONSTRUCTION DETAILS
MW-63S

ENVIRTE CORPORATION

HARTFORD

CONNECTICUT

PROJ. NO. 91-580 DATE: JUNE 1993 SCALE: N.T.S.

FILENAME: W63S.DWG

MONITOR WELL COMPLETION REPORT

GENERAL INFORMATION

Town: **Thomaston, Ct**

Site: **Envirite Corporation**

Monitoring Point I.D. No.: **MW-63S**

Date of Completion: **2/4/93**

DEP/WPC I.D.:

Monitoring Point Location:
(relative to site features)

Drilling Contractor: **Arbor Drilling**

Supervising Engineer/Geologist:

Well Construction Method: **Hollow Stem Auger, 4" Casing and
Roller Bit**

Robert Kovach

WELL INFORMATION (ELEVATIONS TO NEAREST 0.1 FEET)

Ground Surface Elevation (MSL):

Well Depth Below Ground Surface: **24.5 ft.**

Top of Steel Casing Elevation (MSL):

Refusal: Yes No: **X**

Top of PVC Casing Elevation (MSL):

Screened Interval: **14.5 to 24.5 ft.** :

Length of Screen: **10 ft.**

Length of Riser Pipe: **16.5 ft.**

Screen Type: **Schedule 40 PVC**

Screen Slot Size: **0.010"**

Filter Fabric: Yes No **X**

Screen Packing: Yes **X** No:

If Yes, Thickness: **12.5 ft.**

Well Inside Diameter: **2.07"**

Material: **Morie Silica Sand**

Grain Size: **#1**

Impermeable Backfill:
Bentonite Chips

Estimated K Screened Interval:

Well Casing Material and Schedule:

Schedule 40 PVC

Method of Well Development:

Time Spent Developing:

Locking **X** or Threaded Cap

Impermeable Backfill:
Volclay Grout

MONITOR WELL COMPLETION REPORT (Continued)

BEDROCK WELLS

Casing Length: **N/A**

Water-Bearing Rock Unit: **N/A**

Water-Bearing Sections (Depths and Approximate Yields): **N/A**

Length of Rock Cores: **N/A**

Diameter of Core Hole: **N/A**

Thickness and Depth of Impermeable Backfill: **N/A**

O-ring Seals: Yes: No:

GEOLOGIC INFORMATION

Aquifer: **Overburden**

Inferred Relationship to Plume; Within Outside **X** Edge

Watershed (Plume Discharge Watercourse): **Branch Brook**

Aquifer Materials (Attach Boring Log):

Attach Maps and Plans Required of G.I.j. and G.4.

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040		PROJECT/LOCATION		BORING NO. <u>MW-63S</u> SHEET <u>1</u> OF <u>2</u> JOB. NO. <u>91-580</u>	
		Envirite Corp.			
		Thomaston, Connecticut			

DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>D. Kowaleski, L. Gammie</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>				BORING LOCATION <u>Northeast corner of property</u> GROUND ELEVATION _____ DATE STARTED <u>02/03/93</u> DATE FINISHED <u>02/04/93</u>			
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DRILLING METHOD <u>Hollow Stem Auger/Spin Casing</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>				WATER LEVEL MEASUREMENTS			
DATE		MS. PT.		WATER AT		HR AFTER COMPLETION	
02/03/93		Ground		10.50			
02/04/93		Ground		14.50			
02/04/93		PVC		16.45		1.0	

DEPTH (ft)	Casing blow ft	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (ft)					
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY									
0.0		S-1	0-2	24/12	26 31 13 16		SILT; trace to little F-M sand; little gravel and cobbles; dark brownish gray.		0 ppm	0.0					
1.0															1.0
2.0															2.0
3.0															3.0
4.0										4.0					
5.0		S-2	5-7	24/16	6 14 26 36		SAND, F-M; little C; little to some silt; little gravel and cobbles; dark yellowish brown to dusky yellowish brown.		0 ppm	5.0					
6.0															6.0
7.0															7.0
8.0															8.0
9.0										9.0					
10.0							10-11.5': BOULDER. Water added for roller bit.			10.0					
11.0		S-3	11.5-	23/9	3 2 16		SAND, F; trace C, and M; trace mica flakes; some silt; dark yellowish brown, wet. Bouldery.		0 ppm	11.0					
12.0										13.5		88 (5')			12.0
13.0															13.0
14.0															14.0
							14': End of boulders.								

PROPORTIONS USED		BORING METHOD		DEPTH		REMARKS: FIELD INSTRUMENT= OVM Model 580B (ppm Isobutylene) 0.010" PVC Screen set 14.5 to 24.5 ft. #1 Moire Sand 12 to 25 ft. Bentonite Chips 9 to 12 ft. Volclay Grout 3 to 9 ft. NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.	
TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50% perfil\wellog04		HSA		0 - 10.5			
		Spin Casing		10 - 25			
		Split Spoon		25 - 27			
						BORING NO. MW-63S	

FUSS & O'NEILL, INC. CONSULTING ENGINEERS MANCHESTER, CT 06040		PROJECT/LOCATION		BORING NO. <u>MW-63S</u> SHEET <u>2</u> OF <u>2</u> JOB. NO. <u>91-580</u>			
		Envirite Corp.					
		Thomaston, Connecticut					
DRILLING CO. <u>Arbor Drilling</u> DRILLER <u>D. Kowaleski, L. Gammie</u> FUSS & O'NEILL REPRESENTATIVE <u>R. Kovach</u>				BORING LOCATION <u>Northeast corner of property</u> GROUND ELEVATION _____ DATE STARTED <u>02/03/93</u> DATE FINISHED <u>02/04/93</u>			
DRILLING METHOD <u>Hollow Stem Auger/Spin Casing</u> SAMPLING METHOD <u>Split Spoon</u> HAMMER WT. <u>140 lbs</u> HAMMER FALL (IN) <u>30</u>				WATER LEVEL MEASUREMENTS			
				DATE	MS. PT.	WATER AT	HR AFTER COMPLETION

DEPTH (FT.)	CASING blow/ft	SAMPLE					SAMPLE DESCRIPTION	USCS	FIELD TESTING	DEPTH (FT.)
		NO.	DEPTH (ft)	PEN REC.	BLOWS/ 6"	SOIL DENSITY				
15.0		S-4	15-17	24/8	15 16 14 11		SAND, F-M; trace to little C; some silt; little gravel; dark yellowish brown, wet.		0 ppm	15.0
16.0										16.0
17.0		S-5	17-19	24/13	7 9 10 9		Same as above, except gravel subangular to subrounded.		0 ppm	17.0
18.0										18.0
19.0		S-6	19-21	24/8	6 8 7 7		Same as above.		0 ppm	19.0
20.0										20.0
21.0		S-7	21-23	24/14	8 7 10 13		SAND, F; some silt; dark yellowish brown. 2" layer of F sand and silt; moderate yellowish brown at 22.5 feet.		0 ppm	21.0
22.0										22.0
23.0		S-8	23-25	24/14	6 9 12 16		23-23.5': Same as above. 23.5-25': SAND, F; trace C; some silt; trace F subrounded gravel; dark yellowish brown.		0 ppm	23.0
24.0										24.0
25.0		S-9	25-27	24/16	22 15 15 36		25-25.5': Same as above. 25.5-27': SAND, F-M; trace C; some silt; trace M subrounded mixed gravel; moderate brown (5YR 4/4).		0 ppm	25.0
26.0										26.0
27.0							End of Boring at 27 ft.			27.0

PROPORTIONS USED TRACE 0 TO 10% LITTLE 10 TO 20% SOME 20 TO 35% AND 35 TO 50% perfill/wellog04	BORING METHOD 	DEPTH 	REMARKS: FIELD INSTRUMENT= OVM Model 580B NOTE: Geologic Log Based on Procedures Described in ASTM Standard D 2488.
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BORING NO.
MW-63S

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. L-01

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA DRILLING

Foreman Ron Holman

Type

Casing

HSA

Sampler

S.S.

Groundwater Readings

GZA
GeoEnvironmental
Rep. Helena Hollauer

I.D./O.D.

2-1/4"

2" O.D.

Hammer Wt.

140 LB.

Date Start 5/25/94 End 5/25/94

Hammer Fall

30"

Location See Plan

Other

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/12	0-2	2-4	120	Top 4": TOPSOIL Bottom 8": Fine to medium SAND, trace Silt	0.5' TOPSOIL	1.	NO EQUIPMENT INSTALLED
					5-4			SAND 3.0'		
10		B	24/24	5-7	3-2	85*	Medium stiff, brown, white, turquoise, black, orange SLUDGE		2.	NO EQUIPMENT INSTALLED
					2-3					
15		C	24/24	10-12	1/12"	105*	Very soft, brown, orange, green, dark blue, black SLUDGE			
					1/12"					
20		D	24/12	15-17	1-1	205*	Top 8": Soft, brown, green, black SLUDGE Bottom 4": Dense, fine to medium SAND and weathered ROCK	16.6'		
					14-22			17.0' SAND		
								END OF EXPLORATION		
25										

- Remarks
- Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.
 - Liner found between sludge and sand.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-01

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. L-02

Page 1 of 2

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA DRILLING

Foreman Ron Holman

Type HSA S.S.

GZA
GeoEnvironmental
Rep. Helena Hollauer

I.D./O.D. 2-1/4" 2" O.D.

Hammer Wt. 140 LB.

Date Start 5/24/94 End 5/24/94

Hammer Fall 30"

Location See Plan

Other

GS.Elev. Datum

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/12	0-2	2-5	55	Top 4": TOPSOIL Bottom 6": Medium dense, fine to medium SAND, trace Silt	0.5" TOPSOIL	1.	NO EQUIPMENT INSTALLED
					15-15					
10		B	24/2	5-7	4-2	4	Medium stiff, orange, brown, black SLUDGE, Rock fragments	5.0'		
					39-12					
15		C	24/22	10-12	1-1	17*	Soft, orange, brown, black SLUDGE			
					2-8					
20		D	24/24	15-17	1-1	43*	Top 2": Soft, black, green SLUDGE Middle 12": Soft, red, orange SLUDGE Bottom 10": Soft, brown and white SLUDGE			
					1-1					
25		E	24/20	20-22	1-1	46*	Top 10": Soft, red, orange SLUDGE Bottom 10": Soft, turquoise SLUDGE			
					1-1					
		F	24/24	25-27	1-1	60*	Soft, red, orange, black, brown, and white mottled SLUDGE			
					1-6					

Remarks
1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-02

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>L-02</u> Page <u>2</u> of <u>2</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
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Boring Co. GZA DRILLING			<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>				
Foreman	<u>Ron Holman</u>		Type	<u>HSA</u>	<u>S.S.</u>		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	<u>Helena Hollauer</u>		I.D./O.D.	<u>2-1/4"</u>	<u>2" O.D.</u>						
Date Start	<u>5/24/94</u>		Hammer Wt.	<u>140 LB.</u>							
	<u>End 5/24/94</u>		Hammer Fall	<u>30"</u>							
Location	<u>See Plan</u>		Other								
GS.Elev.	<u>Datum</u>										

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
35		G	24/16	30-32	52-60	11	Top 10": Very dense, fine to coarse SAND Bottom 6": Weathered ROCK	SAND	1.	NO EQUIPMENT INSTALLED
					56-52			32.0'		
								END OF EXPLORATION		
40										
45										
50										
55										

Remarks	1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-02

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naack Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>L-03</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
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Boring Co. <u>GZA DRILLING</u>			<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>				
Foreman <u>Al Augustine</u>			Type	<u>HSA</u>	<u>S.S.</u>		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep. <u>ClareAnn Walsh</u>			I.D./O.D.	<u>2-1/4"</u>	<u>2" O.D.</u>						
Date Start <u>5/13/94</u> End <u>5/13/94</u>			Hammer Wt.	<u>140 LB.</u>							
Location <u>See Plan</u>			Hammer Fall	<u>30"</u>							
GS.Elev. <u>Datum</u>			Other								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/7	0-2	2-19	18*	Top 2": TOPSOIL Bottom 5": Brown, fine to medium SAND, trace Gravel	0.5'TOPSOIL	1.	NO EQUIPMENT INSTALLED
					10-100					
10		B	24/0	5-7	6-9	NA	No recovery	SAND		
					14-9					
15		C	24/24	10-12	2-1	5*	Soft, black, tan and white SLUDGE	10.0'		
					1-2					
20		D	24/24	15-17	1-1	13*	Soft, black-orange with flecks of white SLUDGE			
					1-2					
25		E	9/6	20-20.7	1-100/3"	6 *	Black SLUDGE	21.0'	2.	
		F	24/4	21-23	16-19	4		SAND AND GRAVEL		
					14-13			23.0'		
								END OF EXPLORATION		

Remarks
 1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. "*" indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-03

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. L-04 Page 1 of 2 File No. 41302.3 Chkd. By: JMB								
Boring Co. GZA DRILLING										Casing		Sampler		Groundwater Readings				
Foreman		Al Augustine			Type		HSA		S.S.		Date	Time	Depth	Casing	Stab. Time			
GZA GeoEnvironmental Rep.		Helena Hollauer			I.D./O.D.		2-1/4"		2" O.D.									
Date Start		5/23/94			End		5/23/94			Hammer Wt.		140 LB.						
Location		See Plan			Hammer Fall				30"									
GS.Elev.		Datum			Other													

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data					
5		A	24/10	0-2	2-5	4	Top 3": TOPSOIL Bottom 7": Medium dense, fine to medium SAND, trace Silt	0.5' TOPSOIL	1.	NO EQUIPMENT INSTALLED	
								SAND			
								5.0'			
10		B	24/24	5-7	2-2	80*	Soft, brown, black, orange SLUDGE	SLUDGE			
15		C	24/24	10-12	2-3	20	Soft, brown, grey, green, orange, white SLUDGE				
20		D	24/24	15-17	1-2	15*	Top 20": Medium stiff, brown, black, orange SLUDGE Bottom 4": Fine to medium SAND	16.6'			
								17.0' SAND			
25		E	24/24	20-22	1-1	40	Top 16": Soft, black, orange, white SLUDGE Bottom 8": Very soft, grey, green SLUDGE	SLUDGE			
		F	24/24	25-27	2/12"-	20*	Top 20": Soft, black, white, grey, green, orange SLUDGE Bottom 4": Loose, black, brown, fine to medium SAND	26.6'			
								27.0' SAND			

Remarks
 1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **L-04**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRITE THOMASTON, CONNECTICUT				Boring No. L-04 Page 2 of 2 File No. 41302.3 Chkd. By: JMB			
Boring Co. GZA DRILLING				Casing HSA		Sampler S.S.		Groundwater Readings			
Foreman Al Augustine		Type HSA		S.S. S.S.		Date 5/23/94		Time 10:00		Depth 31.5'	
GZA GeoEnvironmental Rep. Helena Hollauer		I.D./O.D. 2-1/4"		2" O.D. 2" O.D.		Casing 31.5'		Stab. Time 10:00		Date 5/23/94	
Date Start 5/23/94 End 5/23/94		Hammer Wt. 140 LB.		Hammer Fall 30"		Date 5/23/94		Time 10:00		Depth 31.5'	
Location See Plan		Other See Plan		Date 5/23/94		Time 10:00		Depth 31.5'		Stab. Time 10:00	
GS.Elev. Datum		Date 5/23/94		Time 10:00		Depth 31.5'		Stab. Time 10:00		Date 5/23/94	
D P T H		C B S L N W G S		Sample Information No. Pen./ Rec. Depth (Ft.) Blows/ 6" Field Test Data		Sample Description & Classification		Stratum Description		R M K S	
1		G		24/24 30-32 2-3 20*		Top 19": Soft, black SLUDGE Bottom 5": ROCK fragments		SLUDGE 31.5'		1.	
2		H		24/0 34.5- 100/1" -		No recovery		ROCK FRAGMENTS 34.5'		2.	
3		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
4		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
5		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
6		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
7		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
8		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
9		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
10		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
11		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
12		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
13		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
14		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
15		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
16		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
17		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
18		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
19		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
20		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
21		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
22		34.6		34.6		34.6		END OF EXPLORATION		NO EQUIPMENT INSTALLED	
23		34.6		34.6		34.6					

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRITE THOMASTON, CONNECTICUT		Boring No. <u>L-05</u> Page <u>1</u> of <u>2</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>	
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Boring Co. <u>GZA DRILLING</u>		<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>				
Foreman <u>Al Augustine</u>	Type <u>HSA</u>	<u>2-1/4"</u>	<u>S.S.</u>	<u>Date</u>	<u>Time</u>	<u>Depth</u>	<u>Casing</u>	<u>Stab. Time</u>
GZA GeoEnvironmental Rep. <u>Helena Hollauer</u>	I.D./O.D. <u>2-1/4"</u>	<u>2" O.D.</u>						
Date Start <u>5/19/94</u> End <u>5/20/94</u>	Hammer Wt. <u>140 LB.</u>							
Location <u>See Plan</u>	Hammer Fall <u>30"</u>							
GS.Elev. <u>Datum</u>	Other							

D P T H	C S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data					
5		A	24/16	0-2	2-5	ND	Top 4": TOPSOIL Middle 10": Loose, brown, fine to medium SAND, some Silt Bottom 2": Brown, orange SLUDGE	0.5' TOPSOIL	1.	NO EQUIPMENT INSTALLED	
					3-4			SAND			
								1.2'			
10		B	24/20	5-7	1-1	14*	Soft, orange, brown, black SLUDGE	SLUDGE	1.	NO EQUIPMENT INSTALLED	
					1-1						
15		C	24/24	10-12	1/12"-	4	Very soft, orange, brown, black SLUDGE	SLUDGE	1.	NO EQUIPMENT INSTALLED	
					1/12"						
20		D	24/22	15-17		200*	Soft, black and white speckled SLUDGE	SLUDGE	1.	NO EQUIPMENT INSTALLED	
25		E	24/24	20-22	1-2	95*	Soft, black and orange, brown, green, white SLUDGE	SLUDGE	1.	NO EQUIPMENT INSTALLED	
					2-1						
30		F	24/24	25-27	1-2	400*	Medium stiff, black and brown SLUDGE	SLUDGE	1.	NO EQUIPMENT INSTALLED	
					3-3						

Remarks
 1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. "*" indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-05

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Boring No. L-05

Page 2 of 2

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA DRILLING

Foreman Ron Holman

Type

Casing

HSA

Sampler

S.S.

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

GZA

GeoEnvironmental

Rep.

Helena Hollauer

I.D./O.D.

2-1/4"

2" O.D.

Hammer Wt.

140 LB.

Date Start 5/19/94

End 5/20/94

Hammer Fall

30"

Location

See Plan

Other

GS.Elev.

Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
		G	24/9	30-32	68-32	7	Very dense, brown-medium grey SAND, trace Silt	SAND 32.0'	1.	NO EQUIPMENT INSTALLED
					23-24			END OF EXPLORATION		

R
e
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s

- Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. "***" indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-05

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. L-06

Page 1 of 2

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA DRILLING

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Helena Hollauer

Date Start 5/18/94 End 5/18/94

Location See Plan

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	2-1/4"	2" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/20	0-2	2-2	1.5*	Top 3": TOPSOIL Bottom 17": Medium, brown, turquoise SLUDGE	0.3" TOPSOIL	1.	NO EQUIPMENT INSTALLED
					3-3					
10		B	24/21	5-7	1-1	2.5	Soft, grey-brown SLUDGE with rust and blue flakes			
					1-2					
15		C	24/24	10-12	1/12"	17*	Very soft, dark brown, orange SLUDGE	SLUDGE		
					1					
20		D	24/9	15-17	2-1	8	Soft, dark brown, orange SLUDGE			
					3-1					
25		E1	24/0	20-22	11-12	NA	No recovery			
					10-10					
		E2	24/6	22-24	6-6	7	Stiff, black, orange SLUDGE			
					4-4					
		F	24/24	25-27	1-1	4*	Soft, black, orange and white SLUDGE			
					1-1					

Remarks
1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

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Boring No. L-06

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>L-06</u> Page <u>2</u> of <u>2</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
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Boring Co. <u>GZA DRILLING</u>			<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>				
Operator	<u>Ron Holman</u>		Type	<u>HSA</u>	<u>S.S.</u>		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	<u>Helena Hollauer</u>		I.D./O.D.	<u>2-1/4"</u>	<u>2" O.D.</u>						
Date Start	<u>5/18/94</u>	End	<u>5/18/94</u>	Hammer Wt.	<u>140 LB.</u>						
Location	<u>See Plan</u>		Hammer Fall	<u>30"</u>							
GS Elev.	<u>Datum</u>		Other								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data					
35		G	24/24	30-32	2-2	15"	Soft, black, orange, turquiose SLUDGE	SLUDGE 35.0'	1.	NO EQUIPMENT INSTALLED	
					2-2						
40		H	23/14	35-36.9	67-55	3	Very dense, white to grey ROCK fragments	COBBLES/ BOULDERS 38.0'	END OF EXPLORATION		
45											
50											
55											

R e m a r k s	1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-06

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT		Boring No. L-07 Page <u>1</u> of <u>1</u> File No. 41302.3 Chkd. By: JMB	
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Boring Co. GZA DRILLING		<u>Casing</u>	<u>Sampler</u>	Groundwater Readings					
Foreman	Ron Holman	Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	Helena Hollauer	I.D./O.D.	2-1/4"	2" O.D.					
		Hammer Wt.		140 LB.					
Date Start	5/20/94	End	5/24/94	Hammer Fall					
				30"					
Location	See Plan	Other							
GS.Elev.	Datum								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
		A	24/12	0-2	1-5	1	Top 3": TOPSOIL Bottom 9": Loose, brown, fine to medium SAND, trace Silt	0.3' TOPSOIL	1.	NO EQUIPMENT INSTALLED
					5-6					
5		B	24/24	5-7	1-2	250*	Soft, brown, black, orange SLUDGE	SAND		
					1-2					
10		C	24/24	10-12	1-1	70*	Soft, brown, black, orange SLUDGE	SLUDGE		
					1-1					
15		D	24/22	15-17	2-1	150*	Top 14": Soft, brown, black, orange, red SLUDGE Bottom 8": Very dense, brown, yellow SAND	16.3'		
					42-55					
20		E	24/12	20-22	5-5	20	Medium dense, brown, medium SAND, trace Wood pieces	SAND		
					7-18					
25		F	24/10	25-27	7-12	40	Dense, fine to medium SAND, trace Silt, Rock fragment in tip of spoon	27.0'		
					30-45					
								END OF EXPLORATION		

Remarks
 1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **L-07**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRITE THOMASTON, CONNECTICUT		Boring No. L-08 Page 1 of 1 File No. 41302.3 Chkd. By: JMB	
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Boring Co. GZA DRILLING			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>					
Foreman	Al Augustine		Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	Helena Hollauer		I.D./O.D.	2-1/4"	2" O.D.					
Date Start	5/19/94	End	5/19/94	Hammer Wt.	140 LB.					
Location	See Plan		Hammer Fall	30"						
GS.Elev.	Datum		Other							

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/18	0-2	1-4	1	Top 4": TOPSOIL Bottom 14": Medium dense, brown, fine to medium SAND	0.5' TOPSOIL	1.	NO EQUIPMENT INSTALLED
					11-15			SAND		
								5.0'		
10		B	24/24	5-7	2-2	9*	Medium stiff, brown-black, orange- white SLUDGE		2.	
					3-2					
15		C	24/20	10-12	2-5	5*	Medium stiff, brown, black, orange, green SLUDGE			
					1-2					
20		D	24/24	15-17	WOH-18"	2*	Very soft, black, brown, orange, green SLUDGE			
					3					
25		E	24/10	20-22	5-5	5*	Medium dense, fine to medium SAND and SILT	20.0'		
					6-9			SILT AND SAND		
								25.0'		
								SAND 27.0'		
								END OF EXPLORATION		
25		F	24/8	25-27	8-45	ND	Very dense, brown, fine to medium SAND, some Silt			
					73-22					

Remarks:

- Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.
- Gravel layer at 13.0' depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. L-08

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. L-09 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
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Boring Co. GZA DRILLING			<u>Casing</u>	<u>Sampler</u>	Groundwater Readings					
Foreman	Al Augustine		Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	Helena Hollauer		I.D./O.D.	2-1/4"	2" O.D.					
			Hammer Wt.	140 LB.						
Date Start	5/23/94	End 5/23/94	Hammer Fall	30"						
Location	See Plan		Other							
GS.Elev.	Datum									

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/10	0-2	2-7	25	Top 2": TOPSOIL Bottom 8": Medium dense, brown, fine to medium SAND, trace Silt	0.2' TOPSOIL	1.	NO EQUIPMENT INSTALLED
					10-7					
10		B	24/24	5-7	6-12	7*	Top 10": Very stiff, orange, brown SLUDGE Middle 1": ROCK fragments, black Sand Bottom 13": Very stiff, grey, green SLUDGE	5.0'		
					12-5					
15		C	24/24	10-12	1-1	10*	Top 12": Soft, black SLUDGE Bottom 12": Soft, orange, brown SLUDGE	SLUDGE		
					1-1					
20		D	24/24	15-17	WOH/18"-1	22 *	Very soft, brown, black, orange, white, green SLUDGE			
25		E	24/24	20-22	18-13	25*	Top 14": Hard, brown, white, black SLUDGE Bottom 10": Dense, brown, fine to medium SAND, trace Silt	21.2'		
					24-14			SAND 22.0'		
								END OF EXPLORATION		

R e m a r k s	1. Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.		Boring No. L-09
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Boring No. **L-10**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA DRILLING**

Foreman **Al Augustine**

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

Date Start **5/11/94** End **5/11/94**

Location **See Plan**

GS.Elev. **Datum**

Type **HSA** **S.S.**

I.D./O.D. **2-1/4"** **2" O.D.**

Hammer Wt. **140 LB.**

Hammer Fall **30"**

Other

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/8	0-2	1-5	150*	Top 3": TOPSOIL Bottom 7": Brown, fine SAND	0.3' TOPSOIL	1.	NO EQUIPMENT INSTALLED
					4-4			SAND		
								5.0'		
		B	24/22	5-7	2-2	8*	Soft, green-orange SLUDGE			
					1-2					
10										
		C	24/24	10-12	8-4	4*	Medium stiff, black with flecks of green and white SLUDGE			
					2-3		(13' Gravel)	SLUDGE		
15		D	24/3	15-17	WOH/6	4*	Soft, black, bright green, orange SLUDGE, trace fine Sand		2.	
					1-2-12			20.0'		
								SAND		
								22.0'		
								END OF EXPLORATION		
20		E	2/1	20-20.2	100/2"	4	Dark grey, fine to medium SAND			
25										

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- Soil samples field screened for volatile organic compounds (VOCs) with a 11.7 eV portable HNu Model PI-101, photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values for each sample. *** indicates sample sent to laboratory for additional analysis. ND indicates None Detected above background.
- Auger refusal at 22.0' depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **L-10**

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Boring No. **W-01**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA DRILLING**

Foreman **Al Augustine**

GZA
GeoEnvironmental
Rep. **H. Hollauer/ V. Roe**

Date Start **5/5/94** End **5/26/94**

Location **See Plan**

GS.Elev. **Datum**

Casing **HSA** Sampler **S.S.**
I.D./O.D. **2-1/4"** **2" O.D.**
Hammer Wt. **140 LB.**
Hammer Fall **30"**

Other

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
5/31/94	0918	16.5'		

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		S-1	24/11	0-2	2-6	5	Medium dense, brown, fine SAND, little Silt	SAND	1.	NO EQUIPMENT INSTALLED
					10-19					
		S-2	24/14	2-4	19-23	ND	Medium dense, brown, fine SAND, little Silt, trace Gravel			
					20-20					
		S-3	24/19	4-6	13-10	62	Medium dense, dark-grey, fine SAND, little Silt, trace Gravel, (blue- green discoloration with 1-2mm flakes present)			
					7-27					
10		S-4	2/0	6-6.2	100/2"	-	No recovery			
		A	24/5	8-10	11-11	600	Medium dense, dark-brown, fine to medium SAND, trace Wood fragments			
					14-7					
		B	24/10	10-12	4-3	800 *	Loose, dark-brown, fine to medium SAND, little Silt			
15					3-4					
		C	24/2	12-14	5-7	414	Medium dense, dark-brown, fine to medium SAND, little Silt			
					5-8					
		D	15/6	14-15.2	7-13	60	Very dense, grey-brown, fine to medium SAND, trace Silt, trace fine Gravel			
					100/3"					
20		E	24/4	16-18	22-30	50	Very dense, grey-brown, fine to medium SAND, (rock fragments)		2.	NO EQUIPMENT INSTALLED
					25-23					
25										
								18.0'		
								END OF EXPLORATION		

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1. Soil samples field screened for volatile organic compounds (VOCs) using a 10.0 eV portable Thermo Environmental Instruments Model 580B OVM photoionization detector. ND indicates None Detected. *** indicates sample sent to lab for analysis.
 2. Sample wet at approximately 16.5 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **W-01**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>W-02</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
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Boring Co. GZA DRILLING			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>					
Foreman	<u>Al Augustine</u>		Type	<u>HSA</u>	<u>S.S.</u>	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	<u>Helena Hollauer/Valerie Roe</u>		I.D./O.D.	<u>4-1/4"</u>	<u>2" O.D.</u>					
Date Start	<u>5/31/94</u>	End	<u>5/31/94</u>	Hammer Wt.	<u>140 LB.</u>					
				Hammer Fall	<u>30"</u>					
Location	<u>See Plan</u>		Other							
GS.Elev.	<u>Datum</u>									

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/6	0.5-2.5	5-11	8	Top 5": ASPHALT Medium dense, brown-grey, fine to medium SAND, rock fragments	0.5' ASPHALT	1.	NO EQUIPMENT INSTALLED
		B	20/12	2.5-4.2	44-47	8	Very dense, brown, fine to medium SAND, rock fragments	SAND	2.	
					43-36/2"					
		C	24/18	4.2-6.2	61-45	7	Very dense, brown-grey, fine to coarse SAND, some fine Gravel, rock fragments	7.0'	3.	
		D	9/9	6.2-7.0	60	7	Very dense, brown-grey, fine to coarse SAND (rock fragments)			
10		E	24/18	7-9	55-62	7	Very dense, fine to medium GRAVEL (rock fragments), some medium to coarse Sand	SAND GRAVEL COBBLES		
		F	23/16	9-10.9	29-70	7	Very dense, fine to medium GRAVEL (rock fragments), some medium to coarse Sand			
					80-100/5"					
15		G	22/16	11-12.8	18-88	7	Very dense, fine to medium GRAVEL (rock fragments), some medium to coarse Sand	13.0'		
					57-100/4"			END OF EXPLORATION		
		H	0/0	13-13	100/0"	-	Auger refusal			
20										
25										

Remarks

- Soil samples field screened for volatile organic compounds (VOCs) using a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector. ND indicates None Detected. *** indicates sample sent to laboratory for additional analysis.
- At about 3.5' depth, a piece of white PVC conduit and a rubber cord was found. According to John Krupa of Envirite, it was their inactive NPDES Discharge pipe.
- Auger refusal at 4.5' depth. New boring located 4' south of original boring. Split spoon sampling started at 7.0' depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-02

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Boring No. W-03

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File No. 41302.3

Chkd. By: JMB

Boring Co. GZA DRILLING

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Helena Hollauer/Valerie Roe

Date Start 6/1/94 End 6/2/94

Location See Plan

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	2-1/4"	2" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
6/2/94	1200	24.0'	34.0'	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
5		A	24/14	0-2	2-5	ND	Top 3": TOPSOIL Bottom 11": Loose, fine to medium SAND, trace Silt	0.3" TOPSOIL SILTY SAND 0.2'	1.	NO EQUIPMENT INSTALLED
					5-3					
		B	24/24	2-4	3-3	ND *	Medium stiff, brown, black, orange, green SLUDGE			
					3-4					
		C	24/22	4-6	1-1	ND	Soft, brown, orange, black, green SLUDGE			
					1-1					
10		D	24/20	6-8	1-1	11	Soft, green, light brown to brown, black SLUDGE			
					1-1					
		E	24/18	8-10	WOH-12"	5	Top 16": Very soft, light brown to brown, black, white SLUDGE Bottom 2": Fine to medium SAND	9.8'		
					12-14					
		F	24/4	10-12	1-3	ND	Top 2": Medium stiff, black, brown, orange SLUDGE Bottom 2": Loose, fine to medium SAND	10.0' SAND 11.8' SLUDGE		
15					4-1			12.0' SAND SLUDGE		
		G	24/4	12-14	2-2	7	Soft, orange, white, brown SLUDGE			
					1-1					
		H	24/18	14-16	1-2	2	Top 10": Soft, orange, green, brown, SLUDGE Bottom 8": Loose, fine to medium SAND	14.8' SAND 16.0'		
					3-7					
20		I	24/20	16-18	9-9	165	Very stiff, red, black SLUDGE			
					12-9					
		J	24/18	18-20	8-7	410	Stiff, red, black SLUDGE			
					7-7					
		K	24/18	20-22	7-9	945*	Top 4": Very stiff, red SLUDGE, Wood pieces Middle 8": Medium dense, fine SAND Bottom 6": Medium dense, fine to medium GRAVEL (rock fragments)	20.4' COBBLES		
25					14-15		No recovery	24.0'		
		M	24/18	24-26	9-14	356*	Top 12": Dense, brown, fine to medium SAND Bottom 6": Dense, black, medium to coarse SAND			
					18-16					
		N	24/18	26-28	16-12	179	Medium dense, black, medium to coarse SAND	SAND (waste) 28'		
					15-20					
		O	24/20	28-30	42-62	400	Very dense, black, medium to coarse SAND, trace fine Gravel	SAND		
					53-48					

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1. Soil samples field screened for volatile organic compounds (VOCs) using a 10.0 eV portable Thermo Environmental Instruments Model 580B OVM photoionization detector. "ppm" indicates parts per million. ND indicates None Detected. "*" indicates sample sent to laboratory for additional analysis.
2. Sample wet at approximately 24' below grade.
3. Oily, wet texture, odor.
4. Waste material from 24 to 26 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-03

[illegible]

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists													Boring No.	W-04	
27 Naek Road Vernon, Connecticut 06066 (203) 875-7655						ENVI RITE THOMASTON, CONNECTICUT							Page	1 of 1	
													File No.	41302.3	
													Chkd. By:	JMB	

Boring Co. GZA GeoEnvironmental, Inc.									Casing	Sampler	Groundwater Readings				
Foreman	AI Augustine						Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time	
GZA GeoEnvironmental Rep.	H. Hollauer/C. Walsh						I.D./O.D.	2-1/4"	3" O.D.	10/18/94	1350	17.5'	16.0'	0 hours	
Date Start	10/18/94 End 10/18/94						Hammer Wt.		140 LB.						
Location							Hammer Fall		30"						
GS.Elev.	Datum						Other								

D P T H	C B S L N W G S	No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data	Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
	A	24/20	0.5-2.5	10-52	ND	Sample A: Top 3": ASPHALT Middle 6": Grey, fine SAND and coarse fine GRAVEL Bottom 11": Grey, fine SAND	ASPHALT 0.3'	1.	NO EQUIPMENT INSTALLED	
				15-10		Sample B: Very dense, brown, fine SAND, trace Silt				
	B	15/6	2.5-3.7	7-48	ND					
				100/3"						
5										
	C	24/6	6.5-8.5	7-8	ND	Sample C: Medium dense, brown, fine SAND, trace Silt				
				10-11						
	D	24/20	8.5-10.5	5-6	ND	Sample D: Loose, brown, fine SAND, trace Silt	SAND			
10				3-3		Sample E: Top 10": Grey-brown, fine SAND and SILT				
	E	24/18	10.5-12.5	1-2	ND	Middle 1": Brown, medium SAND Bottom 7": Grey-brown, fine SAND and SILT				
				2-2		Sample F: Top 3": Pink-white, medium SAND Middle 6": Brown, fine SAND Bottom 13": Black, Clayey SILT				
	F	24/22	12.5-14.5	3-3	ND	Sample G: Loose, brown-grey, fine SAND				
15				1-9		Sample H: Top 3": Brown-grey, fine SAND Bottom 10": Fine to medium GRAVEL, (rock fragments)	16.8'			
	H	13/13	16.5-17.6	20-22	ND *	Sample I: Very dense, brown-grey SAND and fine to medium GRAVEL (rock fragments)	GRAVEL			
				100/1"						
20	I	24/6	18-20	127-41	ND		20.0'			
				45-27			END OF EXPLORATION			
25										

Remarks:
1. Soil samples field screened for volatile organic compounds with a 10.6 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.	W-04
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THOMASTON, CONNECTICUT

Boring No. W-05

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File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Al Augustine

GZA
GeoEnvironmental
Rep. H. Hollauer/C. Walsh

Date Start 10/19/94 End 10/19/94

Location _____

GS.Elev. _____ Datum _____

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
10/19/94	0920	16.9'	out	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5		A	24/12	0.5-2.5	15-18	ND	Dense, grey-brown, fine to medium GRAVEL	ASPHALT 2"	1.	NO EQUIPMENT INSTALLED
					18-23					
		B	24/4	2.5-4.5	10-7	ND	Medium dense, grey-brown, fine GRAVEL and medium SAND	GRAVEL 4.5'		
		C	24/18	4.5-6.5	3-6	ND	Medium dense, red-brown, fine SAND and SILT			
					6-9					
10		D	24/16	6.5-8.5	14-12	ND	Medium dense, red-brown, fine SAND and SILT			
					9-6					
		E	24/14	8.5-10.5	2-2	ND	Loose, grey-black, fine SAND and SILT	SAND AND SILT		
					3-1					
		F	24/18	10.5-12.5	2-1	ND	Very loose, grey-black, fine SAND and SILT			
15					2-2					
		G	11/6	12.5-13.4	10-100/5"	ND	Very dense, grey-black, fine SAND and SILT (Gravel in tip of spoon)			
								14.7'		
		H	2/2	14.5-14.7	100/2"	ND	Very dense, grey, fine to medium SAND, trace coarse Gravel, trace Silt (Coarse GRAVEL from 14.7 to 16.5 foot depth)	GRAVEL 16.5'		
20		I	24/8	16.5-18.5	24-23	ND *	Very dense, grey-brown, medium to coarse SAND, trace fine to medium Gravel	SAND 18.5'		
					31-25					
								END OF EXPLORATION		
25										

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- Soil samples field screened for volatile organic compounds with a 10.6 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-05

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naack Road Vernon, Connecticut 06066 (203) 875-7655		Boring No. W-06 Page 1 of 1 File No. 41302.3 Chkd. By: JMB	
Boring Co. GZA GeoEnvironmental, Inc.		ENVIRITE THOMASTON, CONNECTICUT	
Foreman Al Augustine		Type HSA	
GZA GeoEnvironmental Rep. H. Hollauer/C. Walsh		I.D./O.D. 2-1/4"	
Date Start 10/19/94 End 10/19/94		Hammer Wt. 140 LB.	
Location		Hammer Fall 30"	
GS.Elev. Datum		Other	

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
10/19/94	1140	22.1'	out	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 10 FOOT DEPTH	10'	1.	NO EQUIPMENT INSTALLED
10		A	24/22	10-12	6-11	0.8	Medium dense, brown-grey, fine to medium SAND, trace Gravel	SAND	14'	
15		B	24/24	12-14	3-3	0.8	Loose, brown-grey, fine SAND and SILT	SILT	20'	
20		C	24/14	14-16	4-3	0.8	Loose, light to dark brown, SILT	SAND	24.0'	
25		D	24/24	16-18	4-5	1.3 *	Loose, grey to black SILT	END OF EXPLORATION		
30		E	24/16	18-20	2-1	1.7	Medium dense, grey to black SILT (Gravel in tip of spoon)	SAND		
35		F	24/6	20-22	18-22	0.4	Dense, light brown to grey, fine SAND	SAND		
40		G	24/12	22-24	40-34	ND *	Very dense, grey, medium SAND	SAND		
45										
50										
55										
60										
65										

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>W-07</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>																																																																																																																																																																																																																																																																																																																																																											
Boring Co. <u>GZA GeoEnvironmental, Inc.</u>										<u>Casing</u> HSA		<u>Sampler</u> S.S.		Groundwater Readings																																																																																																																																																																																																																																																																																																																																																							
Foreman <u>Ron Holman</u>		Type <u>HSA</u>		S.S.		Date <u>10/20/94</u>		Time <u>0930</u>		Depth <u>22.5'</u>		Casing <u>out</u>		Stab. Time <u>0 hours</u>																																																																																																																																																																																																																																																																																																																																																							
GZA GeoEnvironmental Rep. <u>H. Hollauer/C. Walsh</u>		I.D./O.D. <u>4-1/4"</u>		3" O.D.		Hammer Wt. <u>140 LB.</u>		Date Start <u>10/20/94</u>		End <u>10/20/94</u>		Hammer Fall <u>30"</u>		Other																																																																																																																																																																																																																																																																																																																																																							
Location		Datum		GS.Elev.		Date		Time		Depth		Casing		Stab. Time																																																																																																																																																																																																																																																																																																																																																							
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">D P T H</th> <th rowspan="2">C B S L N W G S</th> <th colspan="5">Sample Information</th> <th rowspan="2">Sample Description & Classification</th> <th rowspan="2">Stratum Description</th> <th rowspan="2">R M K S</th> <th rowspan="2">Equipment Installed</th> </tr> <tr> <th>No.</th> <th>Pen./ Rec.</th> <th>Depth (feet)</th> <th>Blows/ 6"</th> <th>Field Test Data</th> </tr> </thead> <tbody> <tr> <td rowspan="10" style="text-align: center; vertical-align: middle;">5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">15.0'</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">1.</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO EQUIPMENT INSTALLED</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="10" style="text-align: center; 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Depth (feet)	Blows/ 6"	Field Test Data	5							NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH	15.0'	1.	NO EQUIPMENT INSTALLED																																																							10							NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH	15.0'	1.	NO EQUIPMENT INSTALLED																																																							15							NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH	15.0'	1.	NO EQUIPMENT INSTALLED																																																							20							NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH	15.0'	1.	NO EQUIPMENT INSTALLED																																																							25							NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH	15.0'	1.	NO EQUIPMENT INSTALLED																																																						
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<div style="display: flex; justify-content: space-between;"> <div style="width: 10%;"> R m a r s </div> <div style="width: 90%;"> 1. Soil samples field screened for volatile organic compounds with a 10.6 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected. </div> </div>																																																																																																																																																																																																																																																																																																																																																																					
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GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. W-08 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
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Boring Co. GZA GeoEnvironmental, Inc.			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>					
Foreman	Ron Holman		Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	H. Hollauer/C. Walsh		I.D./O.D.	4-1/4"	3" O.D.	10/21/94		21.8'	out	0 hours
Date Start	10/20/94		End	10/21/94						
Location			Hammer Wt.	140 LB.						
			Hammer Fall	30"						
GS.Elev.			Other							
	Datum									

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 10 FOOT DEPTH	12.0'	1.	NO EQUIPMENT INSTALLED
10							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
15							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
20							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
25							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
30							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
35							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
40							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
45							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
50							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
55							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
60							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
65							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
70							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
75							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
80							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
85							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
90							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
95							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
100							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
105							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
110							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
115							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
120							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
125							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
130							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
135							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
140							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
145							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
150							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
155							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
160							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
165							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
170							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
175							SAND	22.0'	1.	NO EQUIPMENT INSTALLED
180							SAND	22.0'	1.	

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRTE THOMASTON, CONNECTICUT				Boring No. <u>W-09</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>		
Boring Co. <u>GZA GeoEnvironmental, Inc.</u>				Casing	Sampler	Groundwater Readings				
Foreman <u>Ron Holman</u>		Type <u>HSA</u>		<u>S.S.</u>		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep. <u>H. Hollauer/C. Walsh</u>		I.D./O.D. <u>4-1/4"</u>		<u>3" O.D.</u>		<u>10/26/94</u>	<u>1205</u>	<u>24.0'</u>	<u>out</u>	<u>0 hours</u>
Date Start <u>10/21/94</u> End <u>10/26/94</u>		Hammer Wt. <u>140 LB.</u>		<u>30"</u>						
Location _____		Hammer Fall _____		<u>30"</u>						
GS.Elev. _____		Other _____								
Datum _____										

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 10 FOOT DEPTH	10.0'		NO EQUIPMENT INSTALLED
15							Sample A: Medium dense, brown, fine to medium SAND, little Silt, trace Organics (Roots) (Gravel in tip of spoon)	SAND		
20							Sample B: Top 2.5": Medium dense, dark brown, fine to medium SAND Middle 0.5": SLUDGE Bottom 17": Medium dense, brown to grey, fine to medium SAND, little Silt Sample C: Medium dense, brown to black, fine SAND and SILT, trace fine Gravel Sample D: Very dense, brown, medium to coarse SAND (Gravel in tip of spoon)	20.0'		
25							Sample E: Very dense, brown, fine to coarse SAND, little fine Gravel Sample F: Very dense, grey, fine to coarse SAND and fine to coarse GRAVEL (cobbles) Sample G: Medium dense, oil, black, fine to coarse SAND, some medium Gravel (waste) Sample H: No recovery, spoon oily and wet Sample I: Very dense, black, fine to coarse SAND, trace medium Gravel (waste) S-J: Top 6": Dense, grey, fine to coarse SAND Bottom 18": Dense, orange-brown, medium to coarse SAND and coarse GRAVEL (cobbles), weathered Schist	23.5'		
30							SAND AND GRAVEL			
							SAND (WASTE)			
							29.5'			
							SAND AND GRAVEL 31.5'			
							END OF EXPLORATION			

Remarks

- Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates reading with 10.0 eV 580B PID; second number indicates reading with 10.6 eV 580B PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
- Black poly liner in sample at approximately 16.5 feet below grade.
- Sample observed to have strong odor.
- Sample observed to be oily.
- Waste material from 23.5 to 29.5 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

	Boring No. <u>W-09</u>
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GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. W-10 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
Boring Co. GZA GeoEnvironmental, Inc.					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>					
Foreman Ron Holman		Type HSA		S.S.		Date	Time	Depth	Casing	Stab. Time				
GZA GeoEnvironmental Rep. H. Hollauer/C. Walsh		I.D./O.D. 4-1/4"		3" O.D.		10/27/94	1230	24.2'	out	0 hours				
Date Start 10/27/94 End 10/27/94		Hammer Wt. 140 LB.		Hammer Fall 30"										
Location		Other												
GS.Elev.		Datum												

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 11 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
15		A	24/20	11-13	10-9	3.1/4.1	Medium dense, grey-brown-orange SLUDGE	11.0'		
					3-3					
20		B	24/4	16-18	39-43	2.1/3.1	Very dense, fine to coarse GRAVEL (cobbles)	16.0'		
					42-38					
25		C	24/22	18-20	18-23	2.7-2.1	Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel	18.0'		
					23-42					
30		D	4/0	20-20.3	100/4"	---	No recovery	SAND		
30		E	24/0	22.5-24.5	48-52	---	No recovery			
					51-52					
30		F	24/0	25-27	60-55	---	No recovery			
					35-38					
30		G	24/12	27-29	4-11	2.1-4.1	Medium dense, brown to grey, fine to coarse SAND, some fine to coarse Gravel	29.0'		
					28-26					
30								END OF EXPLORATION		

Remarks

1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates reading with a 10.0 eV 580B PID; second number indicates reading with a 10.6 eV 580B PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

	Boring No. W-10
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GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. W-11 Page 1 of 1 File No. 41302.3 Chkd. By: JMB											
Boring Co. GZA GeoEnvironmental, Inc.										<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>							
Foreman		Ron Holman			Type		HSA		S.S.		Date		Time		Depth		Casing		Stab. Time		
GZA GeoEnvironmental Rep.		H. Hollauer/C. Walsh			I.D./O.D.		4-1/4"		3" O.D.		10/31/94		0936		23.6'		out		0 hours		
Date Start		10/31/94			End		10/31/94			Hammer Wt.		140 LB.									
Location					Hammer Fall		30"														
GS.Elev.		Datum			Other																

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
15									2.	
20								20.0'	3.	
	A	20/10	20-21.7	17-30	3.3/3.8*	Very dense, brown, fine to coarse SAND, some fine to coarse Gravel	SAND 21.6'			
				54-100/2"						
	B	4/0	21.7-22	100/4"	—	Spoon refusal	COBBLES			
25								25.5'	4.	
	C	24/0	24-26	65-67	—	No recovery				
				56-51						
	D	24/12	26-28	55-60	69/60*	Very dense, grey, fine to coarse SAND	SAND (WASTE) 28.0			
30								30.0'	5.	
	E	24/22	28-30	16-20	37/24*	Top 14": Medium dense, grey-brown, fine to coarse SAND Bottom 8": Medium dense, grey-brown, fine to coarse GRAVEL	SAND AND GRAVEL			
				10-28						
							END OF EXPLORATION			

Remarks

1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates readings with a 10.0 eV PID; second number indicates readings with a 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
 2. Augered through cobbles from 22 to 24 feet.
 3. Waste material from 25.5 to 28 feet below grade.
 4. Bottom 6 inches of sample black and oily, strong odor observed.
 5. Rods 2 feet above spoon oily.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>W-12</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
Boring Co. <u>GZA GeoEnvironmental, Inc.</u>					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>					
Foreman <u>Al Augustine</u>		Type <u>HSA</u>		<u>S.S.</u>		<u>Date</u>	<u>Time</u>	<u>Depth</u>	<u>Casing</u>	<u>Stab. Time</u>				
GZA GeoEnvironmental Rep. <u>H. Hollauer/C. Walsh</u>		I.D./O.D. <u>4-1/4"</u>		<u>3" O.D.</u>		<u>11/2/94</u>	<u>0830</u>	<u>23.0'</u>	<u>out</u>	<u>0 hours</u>				
Date Start <u>10/31/94</u> End <u>11/2/94</u>		Hammer Wt. <u>140 LB.</u>												
Location <u>10' east of W-10</u>		Hammer Fall <u>30"</u>												
Other														
GS.Elev. <u>Datum</u>														

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
15										
20								20.0'		
	A	24/10	20-22	85-100	1.3/1.7	Very dense, brown, weathered ROCK, (cobbles)				
				52-60						
	B	24/24	22-24	41-48	138/	Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)		COBBLES		
				42-33	133 *					
	C	24/24	24-26	10-12	17/	Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel (cobbles)		26.0'		
				16-24	11.6					
	D	24/18	26-28	82-132	1.7/ND	Very dense, brown, fine to medium SAND		SAND		
				78-52				28.0'		
								END OF EXPLORATION		
30										

Remarks

1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates reading with 10.0 eV PID; second number indicates readings with 10.6 eV PID.)
 PID values represent meter response in parts per million (ppm) above background values.
 *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-12

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>W-13</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
Boring Co. <u>GZA GeoEnvironmental, Inc.</u>					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>					
Foreman <u>Al Augustine</u>		Type <u>HSA</u>		<u>S.S.</u>		<u>Date</u>	<u>Time</u>	<u>Depth</u>	<u>Casing</u>	<u>Stab. Time</u>				
GZA GeoEnvironmental Rep. <u>H. Hollauer/C. Walsh</u>		I.D./O.D. <u>4-1/4"</u>		<u>3" O.D.</u>		<u>11/2/94</u>	<u>1420</u>	<u>dry</u>	<u>out</u>	<u>0 hours</u>				
Date Start <u>11/2/94</u> End <u>11/2/94</u>		Hammer Wt. <u>140 LB.</u>												
Location <u>20' north of W-3</u>		Hammer Fall <u>30"</u>												
Other														
GS.Elev. <u>Datum</u>														

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 22 FOOT DEPTH			NO EQUIPMENT INSTALLED
15										
20										
25								22.0'		
	A	24/24	22-24	2-2	5.1/4.5	Top 14": Brown-yellow SLUDGE Bottom 10": Medium dense, brown, fine to medium SAND Very dense, brown, fine to medium SAND, little coarse Gravel	23.2' SLUDGE	1.		
30							SAND			
	B	18/12	24-25.5	64-48	108/84	25.5'	2.			
30							END OF EXPLORATION	3.		

Remarks:
 1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates readings with a 10.0 eV PID; second number indicates readings with a 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
 2. Auger refusal and split spoon refusal at 25.5 feet below grade.
 3. Wire found in sample.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-13

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRTE THOMASTON, CONNECTICUT		Boring No. W-14 Page 1 of 1 File No. 41302.3 Chkd. By: JMB	
Boring Co. GZA GeoEnvironmental, Inc.				Casing	Sampler	Groundwater Readings	
Foreman	Ron Holman			Type	HSA	S.S.	
GZA GeoEnvironmental Rep.	H. Hollauer/C. Walsh			I.D./O.D.	4-1/4"	3" O.D.	
Date Start	11/3/94		End	11/3/94		Hammer Wt.	140 LB.
Location				Hammer Fall	30"		
GS.Elev.				Other			
Datum							

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
15							No recovery	20.0'	2.	
20		A	24/0	20-22	4-2	0.2/ND	Medium dense, black-brown SLUDGE		2.	
25		B	24/6	22-24	12-28	2.1/1.3	Top 5": Very dense, grey-black, Clayey SILT, trace Roots Bottom 13": Very dense, black- grey, fine to coarse SAND, trace coarse Gravel	24.0'	2.	
30		C	24/18	24-26	30-45	184/	Very dense, grey-brown, fine to coarse SAND, some fine to coarse Gravel (cobbles)		2.	
35		D	24/20	26-28	60-42	164/	Very dense, grey-brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)		2.	
40		E	24/18	28-30	85-81	25/40	Very dense, grey-brown, fine to coarse SAND, little fine Gravel		2.	
45		F	24/20	30-32	14-21	13/19	Very dense, grey-brown, fine to coarse SAND, little fine Gravel		2.	
50							END OF EXPLORATION		2.	

Remarks

1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model S80B photoionization detector (PID). (First number in Field Screen Data column indicates readings with a 10.0 eV PID; second number indicates readings with 10.6 eV PID.)
 PID values represent meter response in parts per million (ppm) above background values.
 *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
 2. Roots found in sample.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

	Boring No. W-14
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GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655						<div style="text-align: center;">ENVIROUTE</div> THOMASTON, CONNECTICUT						Boring No. W-15 Page 1 of 1 File No. 41302.3 Chkd. By: JMB	
Boring Co. GZA GeoEnvironmental, Inc.						Casing	Sampler	Groundwater Readings					
Foreman		Ron Holman				Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.		ClareAnn Walsh				I.D./O.D.	4-1/4"	3" O.D.	11/3/94	1510	21.0'	out	0 hours
Date Start		11/3/94 End 11/4/94				Hammer Wt.		140 LB.					
Location		10' north of W-11				Hammer Fall		30"					
GS.Elev.		Datum				Other							
D P T H	C B S L N W G S	No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data	Sample Description & Classification	Stratum Description	R M K S	Equipment Installed			
									1.	NO EQUIPMENT INSTALLED			
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH						
15													
20		A	24/22	20-22	12-12	4.2/5.8	Medium dense, brown, fine to coarse SAND, trace fine Gravel	20.0'					
		B	24/22	22-24	35-40	3.7/6.7*	Very dense, brown, fine to coarse SAND, trace fine Gravel (rounded)	SAND					
						248-100/3"	Top 8": Medium dense, brown, fine to coarse SAND with Gravel	24.6'					
25		C	24/18	24-26	19-20	99/60	Middle 3": Medium dense, black, oily, fine to coarse SAND	WASTE 24.9'					
		D	24/20	26-28	12-15	6/2*	Bottom 7": Medium dense, brown, fine to medium GRAVEL	SAND	2.				
					14-19		Medium dense, brown, fine to coarse SAND, little fine to coarse Gravel	28.0'					
30								END OF EXPLORATION					
<p>Records</p> <ol style="list-style-type: none"> Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates readings with 10.0 eV PID; second number indicates readings with 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected. Three inches of slightly oil, black soil in middle 3 inches of sample with strong odor; waste encountered at 24.6' to 24.9' depth. 													
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.													
										Boring No. W-15			

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
GeoEnvironmental
Rep. **H. Hollauer/C. Walsh**

Date Start **11/4/94** End **11/4/94**

Location

GS.Elev. Datum

Casing

Type **HSA**

I.D./O.D. **4-1/4"**

Hammer Wt.

Hammer Fall

Other

Sampler

S.S.

3" O.D.

140 LB.

30"

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
11/4/94	1118	25.5'	out	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
20		A	24/22	20-22	10-13	22/39	Medium dense, brown, fine to medium SAND	20.0'		
					15-23				2.	
		B	5/5	22-22.4	150/5"	15/16.4	Very dense, brown, fine to coarse SAND, trace fine to coarse Gravel (cobbles)	22.0'		
25		C	24/22	24-26	25-35	180*/	Very dense, brown-black, fine to coarse SAND, little fine to coarse Gravel (cobbles)		3.	
					28-25	145			4.	
		D	24/20	26-28	31-24	11/8.6	Dense, brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)			
					19-19					
		E	24/20	28-30	12-22	1.8/2.8	Dense, brown, fine to coarse GRAVEL and fine to coarse SAND			
30					17-18			30.0'		
								END OF EXPLORATION		

- R e c o m m e n d a t i o n s**
1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number of Field Screen Data column indicates readings with 10.0 eV PID; second number indicates readings with 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
 2. Liner found at 21.7' depth.
 3. Augered through cobbles from 22.4 to 24 feet.
 4. Strong fuel-oil type odor observed.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GZA GEOTECHNICAL, INC. Consulting Engineers/Geologists/Environmental Scientists						ENVIRITE THOMASTON, CONNECTICUT						Boring No. W-17 Page 1 of 1 File No. 41302.3 Chkd. By: JMB					
27 Naack Road Vernon, Connecticut 06066 (203) 875-7655																	
Boring Co. GZA GeoEnvironmental, Inc.						<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>							
Foreman		Ron Holman				Type	HSA	S.S.	Date	Time	Depth	Casing	Stab. Time				
GZA GeoEnvironmental Rep.		ClareAnn Walsh				I.D./O.D.	4-1/4"	3" O.D.	11/7/94	1330	27.0'	out	0 hours				
Date Start		11/7/94 End 11/7/94				Hammer Wt.		140 LB.									
Location		10' north of W-15				Hammer Fall		30"									
GS.Elev.		Datum				Other											
D P T H	C B S L N W G S	No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data	Sample Description & Classification	Stratum Description	R M K S	Equipment Installed							
									1.	NO EQUIPMENT INSTALLED							
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH										
20	A	24/24	20-22	4-2	0.3/ND	Loose, brown-green-black SLUDGE	20.0'										
				4-6			SLUDGE										
	B	24/18	22-24	30-42	0.7/ND	Very dense, brown, fine to medium SAND, trace fine to medium Gravel	22.0'										
				59-49													
25	C	24/18	24-26	36-46	92/163*	Very dense, brown, fine to coarse SAND, some fine to coarse Gravel											
				56-66			SAND AND GRAVEL										
	D	24/20	26-28	21-30	ND/ND	Very dense, brown, medium to coarse SAND, some fine to medium Gravel											
				22-24													
	E	24/18	28-30	10-17	0.4/ND	Dense, brown, medium to coarse SAND, trace fine to medium Gravel											
				21-27			30.0'										
							END OF EXPLORATION										
1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates readings with 10.0 eV PID; second number indicates readings with 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.																	
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.																	
Boring No. W-17																	

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRTE
THOMASTON, CONNECTICUT

Boring No. W-18

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. H. Hollauer/C. Walsh

Date Start 11/8/94 End 11/9/94

Location

GS.Elev.

Datum

Type

I.D./O.D.

Hammer Wt.

Hammer Fall

Other

Casing

HSA

4-1/4"

140 LB.

30"

Sampler

S.S.

3" O.D.

140 LB.

30"

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
11/8/94	0915	20.7'	out	0 hours
11/9/94	0915	24.7'	out	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 20 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
20		A	24/18	20-22	7-14	29/25.8	Very dense, brown, fine to medium SAND, trace coarse Gravel (cobble in tip of spoon)	20.0'		NO EQUIPMENT INSTALLED
					87-120			SAND		
		B	24/24	22-24	15-65	11/13.9	Top 12": Very dense, brown, fine to coarse SAND, trace coarse Gravel Bottom 12": Very dense, brown, fine to coarse SAND, some coarse Gravel	23.0		
					120-118					
25		C	24/18	24-26	24-126	84/	Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)			
					33-39	66.4*		SAND AND GRAVEL		
		D	24/10	26-28	37-54	-/4.4	Very dense, brown, fine to coarse SAND, little fine to coarse Gravel			
					59-52					
		E	24/24	28-30	18-31	-/3.3	Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)	30.0'		
30					37-36			END OF EXPLORATION		

Remarks

1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicate readings with 10.0 eV PID; second number indicates readings with 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-18

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. W-19 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
Boring Co. GZA GeoEnvironmental, Inc.					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>					
Foreman Al Augustine/Ron Holman		Type HSA		S.S.		<u>Date</u>	<u>Time</u>	<u>Depth</u>	<u>Casing</u>	<u>Stab. Time</u>				
GZA GeoEnvironmental Rep. H. Hollauer/C. Walsh		I.D./O.D. 4-1/4"		3" O.D.		11/10/94	0900	25.1'	out	0 hours				
Date Start 11/9/94 End 11/9/94		Hammer Wt. 140 LB.		30"										
Location		Other												
GS.Elev.		Datum												

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
10							NO SAMPLES COLLECTED FROM 0 TO 15 FOOT DEPTH	15.0'	1.	NO EQUIPMENT INSTALLED
15							Sample A: Loose, black, fine to medium SAND, trace fine to medium Gravel, trace fiberboard Sample B: Very dense, black, fine to medium SAND, trace medium Gravel, trace fiberboard Sample C: Top 2": Very dense, black, fine SAND and PLYWOOD Middle 6": Very dense, white, fine to coarse GRAVEL Bottom 10": Very dense, dark grey, fine to medium SAND, trace fine Gravel Sample D: Very dense, black, fine to coarse SAND, trace fine to coarse Gravel (cobbles) Sample E: Top 2": Very dense, black, fine to coarse SAND and coarse GRAVEL Bottom 2": Very dense, coarse GRAVEL (cobbles) Sample F: Very dense, grey-brown, fine to coarse SAND, some coarse Gravel (cobbles) Sample G: Very dense, black, fine to coarse SAND	23.0'	2.	SAND (WASTE)
20							26.3'	3.	SAND AND GRAVEL	
25							END OF EXPLORATION	4.	END OF EXPLORATION	
30								5.		

Remarks

1. Soil samples field screened for volatile organic compounds with a portable Thermo Environmental Instruments Model 580B photoionization detector (PID). (First number in Field Screen Data column indicates readings with a 10.0 eV PID; second number indicates readings with a 10.6 eV PID.) PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
2. Slightly oily, strong odor.
3. Scrap metal and hemp rope in hole.
4. Waste material from 15 to 23 feet below grade.
5. Auger refusal at 26' depth, attempted to advance spoon to 28' depth, refusal at 26.3' depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **W-19**

[illegible]

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Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. W-21

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Al Augustine

GZA
GeoEnvironmental
Rep. H. Hollauer/C. Walsh

Date Start 11/11/94 End 11/11/94

Location

GS.Elev. Datum

Casing HSA
S.S.
I.D./O.D. 4-1/4" 3" O.D.
Hammer Wt. 140 LB.
Hammer Fall 30"
Other

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
11/11/94	1032	22.2'	out	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 10 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
10		A	24/12	10-12	8-6	ND	Top 6": Medium dense, dark brown, fine SAND, some Silt Bottom 6": Medium dense, dark brown SILT, trace Organics (Roots)	10.0'	1.	NO EQUIPMENT INSTALLED
					5-6					
		B	24/18	12-14	7-7	ND	Medium dense, dark brown SILT, little fine Sand, trace fine to coarse Gravel			
					5-5					
15		C	24/22	14-16	5-4	2.5	Loose, orange-brown SILT, little fine Sand	16.0'		
					3-4					
		D	24/22	16-18	13-36	0.5 *	Top 14": Dense, orange-brown, fine to medium SAND, trace coarse Gravel Bottom 8": Dense, white, medium SAND, trace coarse Gravel (cobbles)		1.	NO EQUIPMENT INSTALLED
					31-23					
		E	3/0	18-18.3	150/3"		No recovery			
20		F	24/0	18.3-20.3	133-190		No recovery			
					153-103					
		G	24/2	22-24	22-35	3.5	Very dense, brown-grey, fine to coarse SAND, trace fine to coarse Gravel (cobbles)		1.	NO EQUIPMENT INSTALLED
					25-18					
25		H	24/6	24-26	54-57	12	Very dense, brown, fine to coarse SAND, trace fine to coarse Gravel			
					70-63					
		I	24/16	26-28	38-32	1.5	Very dense, dark brown, fine to coarse SAND, little fine to coarse Gravel (cobbles)	28.0'		
					27-53			END OF EXPLORATION		

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-21

[illegible]

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. W-23 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
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Boring Co. GZA GeoEnvironmental, Inc.			<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>				
Foreman	Al Augustine		Type	HSA	S.S.		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	H. Hollauer/C. Walsh		I.D./O.D.	4-1/4"	3" O.D.		11/14/94	1240	16.2'	out	0 hours
Date Start	11/14/94		End	11/14/94							
Location	20' west of W-01		Hammer Wt.	140 LB.							
			Hammer Fall	30"							
			Other								
GS.Elev.	Datum										

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data					
5							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH	5.0'	1.	NO EQUIPMENT INSTALLED	
10		A	24/20	5-7	6-9	1.4	Medium dense, brown, fine to coarse SAND, little Silt, little fine to coarse Gravel	SAND			
					7-20						
		B	24/18	7-9	30-25	0.5					Very dense, brown-grey, fine to coarse SAND, some fine to coarse Gravel
					26-27						
		C	24/28	9-11	16-28	2.0 *					
				26-22							
	D	24/22	11-13	22-23	ND	Dense, brown-orange, fine to coarse SAND, some fine to coarse Gravel					
				20-17							
	E	24/18	13-15	18-15	0.7		Dense, brown-orange, fine to coarse SAND, some fine to coarse Gravel				
				19-14							
	F	24/16	15-17	62-30	ND	Top 11": Very dense, weathered COBBLES Bottom 5": Very dense, brown- orange, fine to coarse SAND and fine to coarse GRAVEL					
				23-19							
	G	24/20	17-19	17-17	ND		Dense, brown-orange, fine to coarse SAND and fine to coarse GRAVEL				
				20-32							
	H	24/18	19-21	34-35	ND	Very dense, brown-orange, fine to coarse SAND and fine to coarse GRAVEL					
				40-34							
	I	24/24	21-23	11-12	ND		Medium dense, brown-orange, fine to medium SAND				
				10-11							
25							SAND AND GRAVEL				
							21.0'				
							23.0'				
							END OF EXPLORATION				

R e m a r k s
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **W-23**

[illegible]

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 (203) 875-7655

ENVIRTE
 THOMASTON, CONNECTICUT

Boring No. **W-25**
 Page **1** of **1**
 File No. **41302.3**
 Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
 GeoEnvironmental
 Rep. **H. Hollauer/C. Walsh**

Date Start **11/21/94** End **11/21/94**

Location **23' south of W-24**

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
11/21/94	1145	15.0'	15.0'	15 minutes

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DETPH		1.	----- NO EQUIPMENT INSTALLED
								5.0'		
								SAND		
								9.0'		
10		A	24/24	5-7	8-12	2.6 *	Medium dense, brown-orange, fine SAND, some Silt		2.	
					9-7					
		B	24/12	7-9	7-6	1602	Medium dense, grey-brown, fine SAND, trace Silt			
					5-5					
		C	24/5	9-11	3-3	1268 *	Loose, black, oily, fine SAND, some Silt, trace Rubber			
15					4-3		Top 12": Loose, dark brown, oily, fine SAND Bottom 12": Loose, grey-brown, fine SAND, some Silt	SAND AND RUBBER (WASTE) 12.0'	2. 3. 4.	
		D	24/24	11-13	3-4	1206				
					4-6					
		E	24/14	13-15	3-3	290 *	Top 12": Loose, grey-brown, fine SAND, trace Roots Bottom 2": Very dense, white, fine to medium GRAVEL (Quartz)	SAND AND GRAVEL		
					20-100/5"					
20		F	24/10	15-17	96-47	336	Very dense, brown-grey, fine to coarse SAND and GRAVEL		5.	
					27-18					
		G	24/24	17-19	15-15	142	Medium dense, grey-brown, fine to coarse SAND and GRAVEL			
					12-13			19.0'		
								END OF EXPLORATION		
25										

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.
 2. Rubbery texture.
 3. Flecks of red and green rubber in sample.
 4. Headspace reading on top 12 inches.
 5. Waste material at 9 to 12 foot depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **W-25**

[illegible]

[illegible]

[illegible]

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Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. W-29

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/6/94 End 12/6/94

Location _____

GS.Elev. _____ Datum _____

Type _____

I.D./O.D. _____

Hammer Wt. _____

Hammer Fall _____

Other _____

Casing _____

4-1/4"

Sampler _____

3" O.D.

140 LB.

30"

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
12/6/94	1315	12.2'	13.0'	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
	A	24/18	5-7	5-5	ND	Sample A: Loose, brown, fine SAND and SILT, trace medium Gravel	5.0'			
				5-6			SAND AND SILT			
	B	24/18	7-9	3-4	ND	Sample B: Loose, brown, fine SAND and SILT, trace medium Gravel		9.0'		
				3-5						
10	C	24/8	9-11	2-3	ND	Sample C: Loose, grey-brown SILT, little fine Sand, trace medium Gravel	SILT			
				2-2						
		D	24/8	11-13	3-3	1.4		Sample D: Loose, dark brown SILT, trace fine Sand, trace fine to medium Gravel		
				3-6						
	E	24/12	13-15	3-14	6.4 *	Sample E: Top 3": Medium dense, brown SILT, some fine Gravel Bottom 9": Medium dense, dark brown, fine to coarse SAND and fine to medium Gravel	13.3'			
				11-11						
15	F	16/12	15-16.3	14-40	8.3	Sample F: Top 3": Very dense, grey, fine SAND Bottom 9": Very dense, grey, fine to coarse SAND and fine to coarse GRAVEL	SAND AND GRAVEL			
				100/4"						
		G	24/12	17-19	52-49	5.9		Sample G: Very dense, grey, fine to coarse SAND (cobble jammed in tip of spoon)		
				41-5						
20							19.0'			
							END OF EXPLORATION			
25										

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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
2. 3-inch sheen in middle section of sample.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-29

Boring No. W-30
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Date	Time	Depth	Casing	Stab. Time
12/7/94	1200	14.1'	15.0'	0 hours

GS Elev. _____ Datum _____

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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.

2. Organic odor/oil odor detected in sample.

3. Rubbery texture.

4. Oily waste.

5. Waste material from 11.5 to 15 feet below grade.

Boring No. W-30

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **W-31**
Page **1** of **1**
File No. **41302.3**
Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

Date Start **12/7/94** End **12/7/94**

Location _____

GS.Elev. _____ Datum _____

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
12/7/94	1500	12.5'	15.0'	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
5		A	24/16	5-7	7-5	1.5	Medium dense, fine SAND, little fine to medium Gravel, trace Silt	5.0'	SAND	
					7-5					
		B	24/18	7-9	5-3	0.3	Loose, brown, fine SAND, little fine to medium Gravel, little Silt			
					5-3					
10		C	24/22	9-11	2-2	0.8	Very loose, brown-grey, fine SAND, little Silt, trace medium Gravel			
					1-2					
		D	24/18	11-13	12-4	3.6	Top 12": Loose, brown, fine to coarse SAND Bottom 6": Loose, dark grey, fine to coarse SAND			
					3-3					
		E	24/12	13-15	3-4	4.1 *	Medium dense, brown, fine to coarse SAND, little Silt			
					8-16					
15		F	24/10	15-17	13-26	0.5	Very dense, grey, fine to medium SAND, little fine Gravel		END OF EXPLORATION	
					23-16					
		G	24/20	17-19	14-12	0.3	Top 8": Medium dense, brown, fine to coarse SAND, trace medium Gravel Bottom 12": Medium dense, grey, fine SAND	19.0'		
					7-7					
20										
25										

Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **W-31**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655						<div style="text-align: center;"> ENVI RITE THOMASTON, CONNECTICUT </div>						Boring No. W-32 Page 1 of 1 File No. 41302.3 Chkd. By: JMB			
Boring Co. GZA GeoEnvironmental, Inc.						<u>Casing</u> HSA		<u>Sampler</u> S.S.		<u>Groundwater Readings</u>					
Foreman		Ron Holman				Type	HSA		S.S.		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.		ClareAnn Walsh				I.D./O.D.	4-1/4"		3" O.D.		12/8/94	1100	11.2'	15.0'	0 hours
Date Start		12/8/94				Hammer Wt.			140 LB.						
End		12/8/94				Hammer Fall			30"						
Location						Other									
GS.Elev.		Datum													

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH	5.0'	1.	----- NO EQUIPMENT INSTALLED
10	A	24/2	5-7	22-17	1.3	Dense, dark brown, fine SAND, trace fine Gravel	SAND	11.0'	2.	
				14-13						
	B	24/1	7-9	12-10	0.7	Medium dense, brown, fine SAND, trace fine Gravel				
				9-7						
15	C	24/18	9-11	1-1	105 *	Very loose, brown-grey, fine SAND and SILT	SAND AND SILT SOME RUBBER 13.0'(WASTE)	13.0'	2.	
				2-2						
	D	24/24	11-13	2-3	839	Loose, brown-grey, fine SAND and SILT, some Rubber				
				4-6						
20	E	24/18	13-15	2-5	565 *	Medium dense, brown, fine to medium SAND, some fine to medium Gravel	SAND AND GRAVEL	19.0'	2. 3. 4.	
				6-13						
	F	24/16	15-17	16-8	73	Medium dense, grey, fine to coarse SAND, some fine Gravel				
				9-17						
25	G	24/10	17-19	24-37	196	Very dense, grey, fine to coarse SAND and fine to medium GRAVEL	END OF EXPLORATION			
				41-43						

Remarks:

- 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
- 2. Strong odor observed in sample.
- 3. PID readings collected inside building
- 4. Waste material from 11 to 13 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-32

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ENVIRITE
 THOMASTON, CONNECTICUT

Boring No. **W-33**
 Page **1** of **1**
 File No. **41302.3**
 Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
 GeoEnvironmental
 Rep. **ClareAnn Walsh**

Date Start **12/8/94** End **12/8/94**

Location _____

GS.Elev. _____ Datum _____

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
12/8/94	1000	14.5'	15.0'	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
10		A	24/12	5-7	12-38	ND/1.2	Very dense, brown, fine SAND, little Silt, trace fine Gravel	5.0'	2.	
					21-44					
		B	24/12	7-9	5-5	ND/0.4				
					5-5					
		C	15/4	9-10.2	8-28	0.1/2.3				
15					100/3"		Very dense, grey-brown, fine to coarse SAND, little fine Gravel			SAND
		D	24/4	11-13	20-17	ND/3.4*				
					15-10					
		E	24/5	13-15	14-8	ND/0.4				
					7-14					
20		F	24/4	15-17	11-12	-/4.7	Medium dense, brown, fine to coarse SAND, trace fine Gravel			
					15-22					
		G	24/3	17-19	20-21	-/0.4				
					19-33					
25							Medium dense, brown, fine to coarse SAND, trace fine Gravel	19.0'		
								END OF EXPLORATION		

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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
 - First number in Field Screen Data column indicates PID reading performed outdoors; second number indicates reading performed indoors.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **W-33**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRITE THOMASTON, CONNECTICUT				Boring No. <u>W-34</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>	
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Boring Co. <u>GZA GeoEnvironmental, Inc.</u>			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>					
Foreman	<u>Ron Holman</u>		Type	<u>HSA</u>	<u>S.S.</u>	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	<u>ClareAnn Walsh</u>		I.D./O.D.	<u>4-1/4"</u>	<u>3" O.D.</u>	<u>12/8/94</u>	<u>1330</u>	<u>14.5'</u>	<u>15.0'</u>	<u>0 hours</u>
Date Start	<u>12/8/94</u>	Date End	<u>12/8/94</u>	Hammer Wt.	<u>140 LB.</u>					
				Hammer Fall	<u>30"</u>					
Location			Other							
GS.Elev.			Datum							

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data					
5							NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED	
10		A	24/6	5-7	7-16	ND/5.1	Dense, brown, tree ROOT and coarse Gravel (Quartz)	5.0'	2.		
					33-35						
		B	24/15	7-9	18-24	ND/2.9	Top 3": Very dense, grey, fine SAND Bottom 12": Very dense WOOD				
					48-19						
		C	24/0	9-11	20-15	-/-	No recovery				
15					10-7			FILL			
		D	24/1	11-13	12-12	ND/1.5	Medium dense, brown SILT and WOOD				
					9-9						
		E	24/0	13-15	18-18		No recovery				
					24-19						
20		F	24/2	15-17	1-3	1.6/5.5	Loose WOOD and dark brown SILT		19.0'		
					4-4						
		G	24/2	17-19	2-9	ND/-	Medium dense WOOD and dark brown SILT				
					11-12						
25								END OF EXPLORATION			

Remarks:

- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
- First number in Field Screen Data column indicates PID readings performed outdoors; second number indicates PID reading performed indoors.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-34

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

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(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. W-36

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/12/94 End 12/12/94

Location

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
12/12/94	1345	13.9'	15.0'	0 hours

D P T H	C B S L N W G S	Sample Information				Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data			
5						NO SAMPLES COLLECTED FROM 0 TO 5 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
10		A	24/0	5-7	27-24	No recovery Medium dense, black, fine to medium SAND, trace Silt, trace fine Gravel Medium dense, black, fine to medium SAND, trace Silt, trace fine Gravel Very dense, dark grey, fine to coarse SAND and fine to coarse GRAVEL No sample, augered through cobbles Very dense, white, fine to coarse SAND and fine to medium GRAVEL (cobbles) Dense, brown, fine to coarse SAND, some fine to medium Gravel	7.0'	2.	
					24-19				
		B	24/4	7-9	11-6				
					6-6				
		C	24/8	9-11	3-5		SAND		
15					9-18				
		D	14/10	11-12.2	19-34		13.0'		
					100/2"				
		E		13-15			COBBLES		
							15.0'		
20		F	24/8	15-17	95-53				
					31-26				
		G	24/16	17-19	27-21		SAND AND GRAVEL		
					18-28		19.0'		
25							END OF EXPLORATION		

Remarks

- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
- First number in Field Screen Data column indicates PID reading performed outdoors; second number indicates PID reading performed indoors.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-36

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. W-37

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/13/94 End 12/13/94

Location

GS.Elev. Datum

Type

I.D./O.D.

Hammer Wt.

Hammer Fall

Other

Casing

4-1/4"

Sampler

3" O.D.

140 LB.

30"

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time
12/13/94	1015	21.1'	20.0'	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 10 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
10		A	24/4	10-12	19-15	ND/4.2	Dense, brown SILT, some fine to coarse Sand, trace fine Gravel	10.0'	2.	NO EQUIPMENT INSTALLED
					15-15					
		B	24/22	12-14	12-13	ND/1.6	Medium dense, brown, fine to coarse SAND			
					16-16					
15		C	24/20	14-16	6-16	ND/2.4	Dense, brown, fine to coarse SAND			
					17-23					
		D	12/4	16-17	35-	ND/2.0*	Very dense, brown, fine to coarse SAND	18.0'		
					100/6"					
		E	24/20	18-20	66-40	ND/1.2*	Very dense, brown, fine to coarse SAND and coarse GRAVEL (cobbles)			
					36-34					
20		F	24/20	20-22	44-22	1.1/2.0	Very dense, brown, fine to coarse SAND, trace fine Gravel			
					28-37					
		G	24/22	22-24	28-23	97/58*	Dense, grey-brown, oily, fine to coarse SAND and fine to coarse GRAVEL			
					22-17					
25		H	24/17	24-26	20-15	ND/6.1*	Dense, grey, fine to coarse SAND, some fine to coarse Gravel	26.0'	3.	
					15-12					
								END OF EXPLORATION		

R
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
2. First number in Field Screen Data column indicates PID reading performed outdoors; second number indicates PID reading performed indoors.
3. Oily odor.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-37

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. W-38

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/13/94 End 12/13/94

Location

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
12/13/94	1330	21.0'	out	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5							NO SAMPLES COLLECTED FROM 0 TO 10 FOOT DEPTH		1.	NO EQUIPMENT INSTALLED
10		A	24/12	10-12	21-13	ND/2.0	Medium dense, brown, fine to coarse SAND, trace fine Gravel	10.0'		
					14-15					
		B	24/24	12-14	25-17	ND/0.5				
					20-27					
		C	24/14	14-16	17-25	ND/0.9				
					35-44					
		D	24/20	16-18	26-24	ND/1.0*				
					26-26					
		E	24/10	18-20	21-43	ND/0.9	Very dense, brown, fine to coarse SAND, trace fine Gravel		SAND	
					21-18			20.0'		
20		F	24/16	20-22	40-50	ND/1.6				
					49-24			SAND AND GRAVEL 22.0'		
		G	24/20	22-24	12-12	ND/0.1*				
					16-21			SAND 24.0'		
25							Medium dense, brown, fine to coarse SAND, trace fine Gravel		END OF EXPLORATION	

Remarks

- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.
- First number in Field Screen Data column indicates PID reading performed outdoors; second number indicates PID reading performed indoors.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. W-38

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naack Road Vernon, Connecticut 06066 (203) 875-7655		ENVIRITE THOMASTON, CONNECTICUT		Boring No. D-2 Page 1 of 1 File No. 41302.3 Chkd. By: JMB	
Boring Co. GZA GeoEnvironmental, Inc.		Casing HSA		Sampler S.S.	
Foreman Al Augustine		Type HSA		S.S.	
GZA GeoEnvironmental Rep. Helena Hollauer		I.D./O.D. 4-1/4"		3" O.D.	
Date Start 11/16/94 End 11/16/94		Hammer Wt. 140 LB.		Hammer Fall 30"	
Location		Other		Groundwater Readings	
GS.Elev. Datum		Date		Time	
Depth		Casing		Stab. Time	
D P T H		C B S L N W G S		Sample Information	
No.		Pen./ Rec.		Depth (inches) 6	
Blows/		Field Test Data		Sample Description & Classification	
Stratum Description		R M K S		Equipment Installed	
5		A 24/16 5-7 12-19 0.2 *		No samples collected from 0 to 5 foot depth	
10		11-12		5.0' FILL 7.0' END OF EXPLORATION	
15		20		25	
Remarks		1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.			
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.					
Boring No.		D-2			

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. T-1

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Al Augustine

Date Start 2/8/95 End 2/8/95

Location

GS.Elev. Datum

	Casing	Sampler
Type	H.S.A.	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
5							Medium dense, brown, fine to medium SAND, some coarse Gravel, trace Silt	FILL	1.	NO EQUIPMENT INSTALLED
10		A	24/18	9-11	10-17	ND *	Medium dense, brown, fine to medium SAND, some coarse Gravel, trace Silt	12.0' END OF EXPLORATION	2.	
					8-18					
15										
20										
25										

Remarks

- Soil samples field screened for volatile organic compounds with a 10.6 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
- Auger refusal at 12 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. T-1

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. T-2
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File No. 41302.3
Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman
GZA
GeoEnvironmental
Rep. Al Augustine

Date Start 2/8/95 End 2/8/95

Location _____

GS.Elev. _____ Datum _____

	Casing	Sampler
Type	H.S.A.	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
5									1.	NO EQUIPMENT INSTALLED
10										2. END OF EXPLORATION
15										
20										
25										

Remarks

- Soil samples field screened for volatile organic compounds with a 10.6 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.
- Auger refusal at 12.5 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. T-2

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655	ENVIRITE THOMASTON, CONNECTICUT	Boring No. <u>T-3</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>
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Boring Co. <u>GZA GeoEnvironmental, Inc.</u>			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>				
Foreman	<u>Al Augustine</u>	Type		S.S.	Date	Time	Depth	Casing	Stab. Time
GZA		I.D./O.D.		3" O.D.	11/16/94	1333	5.8'	out	0 hours
GeoEnvironmental		Hammer Wt.		140 LB.	11/16/94	1700	8.5'	out	3.5 hours
Rep.	<u>Helena Hollauer</u>	Hammer Fall		30"					
Date Start	<u>11/16/94</u>	End	<u>11/16/94</u>						
Location		Other							
GS.Elev.		Datum							

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
5							No samples collected from 0 to 6' depth	6.0'	1.	NO EQUIPMENT INSTALLED
10		A	24/20	6-8	2-1/12"	127	Very loose, brown-black, fine to coarse SAND, some fine to coarse Gravel	FILL	2.	
					1					
15		B	24/20	10-12	1-14	190 *	Top 13": Medium dense, fine to coarse SAND, some fine to coarse Gravel Bottom 7": Medium dense, black, fine to coarse SAND, some fine to coarse Gravel	14.0'	3.	
					14-18					
20							END OF EXPLORATION		4.	
25										

Remarks	1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected. 2. Split spoon sample has odor. 3. Fiberglass found 1/2" from tip of spoon, soils above fiberglass were wet and soils below fiberglass were dry. 4. Rods oily at 10 fbg.
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.	
Boring No. <u>T-3</u>	

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u> T-4 </u> Page <u> 1 </u> of <u> 1 </u> File No. <u> 41302.3 </u> Chkd. By: <u> JMB </u>																																																																																																																																																																																																																																																																																																																																																							
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Foreman <u> Al Augustine </u>		Type <u> S.S. </u>		Date <u> </u> Time <u> </u>		Depth <u> </u>		Casing <u> </u>		Stab. Time <u> </u>																																																																																																																																																																																																																																																																																																																																																							
GZA GeoEnvironmental Rep. <u> Helena Hollauer </u>		I.D./O.D. <u> 3" O.D. </u>		Hammer Wt. <u> 140 LB. </u>		Date Start <u> 11/16/94 </u> End <u> 11/16/94 </u>		Hammer Fall <u> 30" </u>		Location <u> </u>																																																																																																																																																																																																																																																																																																																																																							
GS.Elev. <u> </u>		Datum <u> </u>		Other <u> </u>		Date <u> </u> Time <u> </u>		Depth <u> </u>		Casing <u> </u>																																																																																																																																																																																																																																																																																																																																																							
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 5%;">D P T H</th> <th rowspan="2" style="width: 5%;">C B S L N W G S</th> <th colspan="5" style="width: 25%;">Sample Information</th> <th rowspan="2" style="width: 25%;">Sample Description & Classification</th> <th rowspan="2" style="width: 15%;">Stratum Description</th> <th rowspan="2" style="width: 5%;">R M K S</th> <th rowspan="2" style="width: 20%;">Equipment Installed</th> </tr> <tr> <th style="width: 5%;">No.</th> <th style="width: 10%;">Pen./ Rec.</th> <th style="width: 10%;">Depth (inches)</th> <th style="width: 10%;">Blows/ 6"</th> <th style="width: 10%;">Field Test Data</th> </tr> </thead> <tbody> <tr> <td rowspan="10" style="text-align: center; vertical-align: middle;">5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td rowspan="10" style="text-align: center; vertical-align: middle;">No samples collected from 0 to 6 foot depth</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">6.0'</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">1.</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO EQUIPMENT INSTALLED</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="10" style="text-align: center; vertical-align: middle;">10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td rowspan="10" style="text-align: center; vertical-align: middle;">Loose, brown, fine to medium SAND, trace fine Gravel</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">FILL 9.5'</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">2.</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">END OF EXPLORATION</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO EQUIPMENT INSTALLED</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="10" style="text-align: center; vertical-align: middle;">15</td> <td></td><td></td><td></td><td></td><td></td><td rowspan="10" style="text-align: center; vertical-align: middle;">Loose, brown, fine to medium SAND, trace fine Gravel</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">FILL 9.5'</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">2.</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">END OF EXPLORATION</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO EQUIPMENT INSTALLED</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="10" style="text-align: center; vertical-align: middle;">20</td> <td></td><td></td><td></td><td></td><td></td><td rowspan="10" style="text-align: center; vertical-align: middle;">Loose, brown, fine to medium SAND, trace fine Gravel</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">FILL 9.5'</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">2.</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">END OF EXPLORATION</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO EQUIPMENT INSTALLED</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td rowspan="10" style="text-align: center; vertical-align: middle;">25</td> <td></td><td></td><td></td><td></td><td></td><td rowspan="10" style="text-align: center; vertical-align: middle;">Loose, brown, fine to medium SAND, trace fine Gravel</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">FILL 9.5'</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">2.</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">END OF EXPLORATION</td> <td rowspan="10" style="text-align: center; vertical-align: middle;">NO EQUIPMENT INSTALLED</td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>													D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data	5							No samples collected from 0 to 6 foot depth	6.0'	1.	NO EQUIPMENT INSTALLED																																																							10						Loose, brown, fine to medium SAND, trace fine Gravel	FILL 9.5'	2.	END OF EXPLORATION	NO EQUIPMENT INSTALLED																																																							15						Loose, brown, fine to medium SAND, trace fine Gravel	FILL 9.5'	2.	END OF EXPLORATION	NO EQUIPMENT INSTALLED																																																							20						Loose, brown, fine to medium SAND, trace fine Gravel	FILL 9.5'	2.	END OF EXPLORATION	NO EQUIPMENT INSTALLED																																																							25						Loose, brown, fine to medium SAND, trace fine Gravel	FILL 9.5'	2.	END OF EXPLORATION	NO EQUIPMENT INSTALLED																																																						
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<div style="display: flex; justify-content: space-between;"> <div style="width: 5%;"> R e m a r k s </div> <div style="width: 95%;"> 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected. 2. Auger refusal at 9.5' depth. </div> </div>																																																																																																																																																																																																																																																																																																																																																																	
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GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. T-5

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Al Augustine

Date Start 2/8/95 End 2/8/95

Location

GS.Elev. Datum

Type

I.D./O.D.

Hammer Wt.

Hammer Fall

Other

Casing

H.S.A.

4-1/4"

Sampler

S.S.

3" O.D.

140 LB.

30"

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
							Auger refusal at 8 feet below grade No sample collected	FILL 8.0' END OF EXPLORATION		NO EQUIPMENT INSTALLED

R
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. T-5

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655						<div style="text-align: center;"> ENVI RITE THOMASTON, CONNECTICUT </div>						Boring No. T-6 Page 1 of 1 File No. 41302.3 Chkd. By: JMB	
Boring Co. GZA GeoEnvironmental, Inc.						<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>			
Foreman		Ron Holman				Type	H.S.A.	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.		Al Augustine				I.D./O.D.	4-1/4"	3" O.D.					
Date Start		2/8/95				Hammer Wt.		140 LB.					
		End 2/8/95				Hammer Fall		30"					
Location						Other							
GS.Elev.		Datum											
DPTH	CBSL NWS	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed			
T H	G S	No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data							
5							Loose, brown, fine to coarse SAND, trace Silt	FILL	1.	NO EQUIPMENT INSTALLED			
10		A	24/14	10-12	2-2	1.5 *	Very dense, black, fine to coarse GRAVEL and fine to coarse SAND, trace Silt	15.0'	END OF EXPLORATION				
15		B	24/22	13-15	86-88	0.2 *							
20					83-100								
25													
Remarks:	1. Soil samples field screened for volatile organic compounds with a 10.6 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.												

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. T-6

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Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. F-1

Page 1 of 1

File No. 41302.3

Chkd. By: _____

Boring Co. GZA GeoEnvironmental, Inc.

Foreman ClareAnn Walsh

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 6/27/94 End 6/27/94

Location Inside Facility Building

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type

Hand

I.D./O.D.

Hammer Wt.

Hammer Fall

Other

Concrete Corer

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches) 6'	Blows/	Field Test Data				
1				0-0.5		*	Cored through Concrete floor	CONCRETE	1.	NO EQUIPMENT INSTALLED
								0.5'		
		A		0.5-0.8		*	Brown, fine to medium SAND	FILL		
								0.8'		
								END OF EXPLORATION (refusal)	2.	
2										
3										
4										
5										

Remarks
1. Samples collected by hand after coring through concrete floor. Upper surface of concrete core sent to laboratory for analysis. *** samples sent to laboratory for analysis.
2. Encountered concrete at 0.8' below floor surface.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. F-1

GZA GEOENVIRONMENTAL, INC.
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Vernon, Connecticut 06066
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. F-2
Page 1 of 1
File No. 41302.3
Chkd. By: _____

Boring Co. GZA GeoEnvironmental, Inc.

Foreman ClareAnn Walsh

Type _____ Casing _____ Sampler Hand

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

I.D./O.D. _____

Hammer Wt. _____

Date Start 6/27/94 End 6/27/94

Hammer Fall _____

Location Inside Facility Building

Other Concrete Corer

GS.Elev. _____ Datum _____

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches) 6'	Blows/	Field Test Data				
1				0-0.5		*	Cored through Concrete floor	CONCRETE	1.	NO EQUIPMENT INSTALLED
		A		0.5-1.0		*	Brown, fine to medium SAND	0.5'		
								FILL		
		B		1.0-1.5			Brown, fine to medium SAND	1.5'		
2								END OF EXPLORATION		
3										
4										
5										

R
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1. Samples collected by hand after coring through concrete floor. Upper surface of concrete core sent to laboratory for analysis. *** samples sent to laboratory for analysis.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. F-2

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27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. F-3
Page 1 of 1
File No. 41302.3
Chkd. By:

Boring Co. GZA GeoEnvironmental, Inc.

Casing

Sampler

Groundwater Readings

Foreman ClareAnn Walsh

Type

Hand

Date Time Depth Casing Stab. Time

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

I.D./O.D.

Hammer Wt.

Date Start 6/27/94 End 6/27/94

Hammer Fall

Location Inside Facility Building

Other

Concrete Corer

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches) 6'	Blows/	Field Test Data				
1				0-0.5		*	Cored through Concrete floor	CONCRETE	1.	NO EQUIPMENT INSTALLED
								0.5'		
	A			0.5-1.0		*	Brown, fine to medium SAND			
								FILL		
2								1.5'		
	B			1.0-1.5			Brown, fine to medium SAND			
								END OF EXPLORATION		
3										
4										
5										

R
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1. Samples collected by hand after coring through concrete floor. Upper surface of concrete core sent to laboratory for analysis. *** samples sent to laboratory for analysis.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. F-3

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

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Vernon, Connecticut 06066
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. F-4

Page 1 of 1

File No. 41302.3

Chkd. By: _____

Boring Co. GZA GeoEnvironmental, Inc.

Casing

Sampler

Groundwater Readings

Foreman ClareAnn Walsh

Type Hand

Date	Time	Depth	Casing	Stab. Time

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

I.D./O.D.

Hammer Wt.

Date Start 6/27/94 End 6/27/94

Hammer Fall

Location Inside Facility Building

Other Concrete Corer

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6	Field Test Data				
1				0-0.5		*	Cored through Concrete floor	CONCRETE	1.	NO EQUIPMENT INSTALLED
		A		0.5-1.0		*	Brown, fine to medium SAND	0.5'		
								FILL		
		B		1.0-1.5			Brown, fine to medium SAND	1.5'		
2								END OF EXPLORATION		
3										
4										
5										

R
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1. Samples collected by hand after coring through concrete floor. Upper surface of concrete core sent to laboratory for analysis. *** samples sent to laboratory for analysis.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. F-4

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRITE THOMASTON, CONNECTICUT				Boring No. F-5 Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: _____			
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Boring Co. GZA GeoEnvironmental, Inc.			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>				
Foreman	ClareAnn Walsh		Type	Hand	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	ClareAnn Walsh		I.D./O.D.						
			Hammer Wt.						
Date Start	6/27/94		End	6/27/94		Hammer Fall			
Location	Inside Facility Building		Other	Concrete Corer					
GS.Elev.	Datum								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches) 6	Blows/	Field Test Data				
1				0-0.5		*	Cored through Concrete floor	CONCRETE	1.	NO EQUIPMENT INSTALLED
								0.5'		
	A		0.5-1.0		*	Brown, fine to medium SAND				
2				1.0-1.5			Brown, fine to medium SAND	FILL		
								1.5'		
	B							END OF EXPLORATION		
3										
4										
5										

R e m a r k	1. Samples collected by hand after coring through concrete floor. Upper surface of concrete core sent to laboratory for analysis. *** samples sent to laboratory for analysis.
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.										Boring No. F-5
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GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. F-6 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
Boring Co. GZA GeoEnvironmental, Inc.					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>					
Boreman Ron Holman		Type				S.S.								
GZA GeoEnvironmental Rep. ClareAnn Walsh		I.D./O.D.				3" O.D.								
Date Start 11/30/94 End 11/30/94		Hammer Wt.				140 LB.								
Location		Hammer Fall				30"								
GS.Elev.		Other												
Datum														

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
		A	24/24	0-6	27-26	0.2 *	Very dense, brown, fine SAND, some fine Gravel		1.	----- NO EQUIPMENT INSTALLED
6					25-14					
12										
18		B		18-24		ND *	Very dense, brown, fine SAND, some fine Gravel			
24										
30										
36		C	18/18	36-42	14-14	ND	Dense, brown, fine SAND, some fine Gravel	42"		
42					30					
48										
54								END OF EXPLORATION		
60										
66										
72										
78										
84										

R
c
m
a
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s

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **F-6**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>F-7</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
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Boring Co. <u>GZA GeoEnvironmental, Inc.</u>			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>					
Foreman	<u>Ron Holman</u>		Type	<u>S.S.</u>		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	<u>ClareAnn Walsh</u>		I.D./O.D.	<u>3" O.D.</u>						
			Hammer Wt.	<u>140 LB.</u>						
Date Start	<u>11/29/94</u>	End	<u>11/29/94</u>	Hammer Fall	<u>30"</u>					
Location			Other							
GS.Elev.	<u>Datum</u>									

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
		A	24/24	0-6	18-19	ND *	Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)	FILL	1.	NO EQUIPMENT INSTALLED
6					50-77					
12							Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL (cobbles)	24" END OF EXPLORATION		
18		B		18-24		ND *				
24										
30										
36										
42										
48										
54										
60										
66										
72										
78										
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 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis.
 ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. F-7

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. F-8 Page 1 of 1 File No. 41302.3 Chkd. By: JMB							
Boring Co. GZA GeoEnvironmental, Inc.					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>								
Foreman Ron Holman		Type				S.S.		Date		Time		Depth		Casing		Stab. Time	
GZA GeoEnvironmental Rep. ClareAnn Walsh		I.D./O.D.				3" O.D.											
Date Start 11/30/94 End 11/30/94		Hammer Wt.				140 LB.											
Location		Hammer Fall				30"											
GS.Elev.		Other															
		Datum															

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	13-28	0.2 *	Dense, brown, fine to medium SAND and fine GRAVEL (processed stone)	FILL	1.	NO EQUIPMENT INSTALLED
					15-60					
12										
18		B		18-24		0.2 *	Dense, brown, fine to medium SAND, little fine Gravel			
24										
30										
36		C	18/18	36-42	83-70	0.2	Very dense, brown-grey, fine to coarse SAND and GRAVEL (cobbles)	42"		
42					70					
48										
54							END OF EXPLORATION			
60										
66										
72										
78										
84										

Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis.

ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **F-8**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRITE THOMASTON, CONNECTICUT				Boring No. F-9 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
Boring Co. GZA GeoEnvironmental, Inc.				Casing		Sampler		Groundwater Readings				
Foreman		Ron Holman		Type		S.S.		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.		ClareAnn Walsh		I.D./O.D.		3" O.D.						
Date Start		11/30/94 End 11/30/94		Hammer Wt.		140 LB.						
Location				Hammer Fall		30"						
GS.Elev.		Datum		Other								
D P T H	C B S L N W G S	Sample Information					Sample Description & Classification		Stratum Description		R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data						
		A	24/24	0-6	6-13	ND *	Dense, red-brown, fine SAND, little fine Gravel				1.	NO EQUIPMENT INSTALLED
6					22-90							
12												
18		B		18-24		ND *	Dense, red-brown, fine to medium SAND, some fine to medium Gravel		FILL			
24												
30												
36		C	18/18	36-42	52-36	ND	Very dense, red-brown, fine to coarse GRAVEL (cobbles) and fine to coarse SAND		42"			
42					57				END OF EXPLORATION			
48												
54												
60												
66												
72												
78												
84												
1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.												
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.												
Boring No. F-9												

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. F-10 Page 1 of 1 File No. 41302.3 Chkd. By: JMB																														
Boring Co. GZA GeoEnvironmental, Inc.					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>																															
Preman Ron Holman					Type		S.S.		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Time</th> <th>Depth</th> <th>Casing</th> <th>Stab. Time</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Date	Time	Depth	Casing	Stab. Time																									
Date	Time	Depth	Casing	Stab. Time																																				
GZA GeoEnvironmental Rep. ClareAnn Walsh					I.D./O.D.		3" O.D.																																	
Date Start 12/1/94 End 12/1/94					Hammer Wt.		140 LB.																																	
Location					Hammer Fall		30"																																	
GS.Elev.					Other																																			
Datum																																								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	32-34	ND *	Very dense, grey and brown, PROCESSED STONE and fine to coarse SAND	FILL	1.	NO EQUIPMENT INSTALLED
					63-26					
12							Very dense, brown, fine to coarse SAND and fine to coarse GRAVEL			
18		B		18-24		ND *				
24							Very dense, brown, fine to coarse SAND, little fine to medium Gravel	42"		
30								END OF EXPLORATION		
36		C	18/18	36-42	41-51	ND				
					77					
42										
48										
54										
60										
66										
72										
78										
84										

Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **F-10**

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. F-11
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 11/30/94 End 11/30/94

Location

GS.Elev. Datum

Casing

Sampler

Groundwater Readings

Type S.S.

I.D./O.D. 3" O.D.

Hammer Wt. 140 LB.

Hammer Fall 30"

Other

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	8-5	ND *	Medium dense, grey, PROCESSED STONE, some fine to coarse Sand	FILL	1.	NO EQUIPMENT INSTALLED
					10-7					
12										
18		B		18-24		ND *	Medium dense, brown, fine to coarse SAND, some fine to medium Gravel			
24										
30										
36		C	18/18	36-42	15-20	ND	Dense, brown, fine to coarse SAND, some fine to medium Gravel	42" END OF EXPLORATION		
42					22					
48										
54										
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66										
72										
78										
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Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

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Boring No. F-11

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. G-1

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Casing

Sampler

Groundwater Readings

Foreman Ron Holman

Type

S.S.

GZA

GeoEnvironmental

Rep.

ClareAnn Walsh

I.D./O.D.

3" O.D.

Hammer Wt.

140 LB.

Date Start 11/18/94

End 11/18/94

Hammer Fall

30"

Location

Other

GS.Elev.

Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	12-19	ND *	Dense, brown, fine to coarse SAND, some fine to coarse Gravel	FILL	1.	----- NO EQUIPMENT INSTALLED
					29-22					
12										
18		B		18-24		ND *	Dense, brown, fine to coarse SAND, some fine to coarse Gravel	FILL	1.	----- NO EQUIPMENT INSTALLED
24										
30										
36		C	18/18	36-42	24-20	ND	Dense, brown-grey, fine to medium SAND	42" END OF EXPLORATION	1.	----- NO EQUIPMENT INSTALLED
42					24					
48										
54										
60										
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.

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Boring No. G-1

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ENVIRITE
 THOMASTON, CONNECTICUT

Boring No. **G-3**
 Page **1** of **1**
 File No. **41302.3**
 Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Al Augustine**

GZA
 GeoEnvironmental
 Rep. **Helena Hollauer**

Date Start **11/18/94** End **11/18/94**

Location _____

GS.Elev. _____ Datum _____

Casing _____ Sampler _____

Type **S.S.**

I.D./O.D. **3" O.D.**

Hammer Wt. **140 LB.**

Hammer Fall **30"**

Other _____

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	5-8	ND *	Medium dense, brown, fine to coarse SAND, trace fine to coarse Gravel	FILL	1.	----- NO EQUIPMENT INSTALLED
					12-19					
12										
18		B		18-24		ND *	Medium dense, brown, fine to coarse SAND, trace fine to coarse Gravel			
24										
30										
36		C	18/18	36-42	36-40	ND	Very dense, brown-grey, fine to coarse SAND, little fine to coarse Gravel (cobbles)	42" END OF EXPLORATION		
42					55					
48										
54										
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66										
72										
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

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Boring No. **G-3**

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. G-4

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Al Augustine

Type

Casing

Sampler

Groundwater Readings

GZA
GeoEnvironmental
Rep. Helena Hollauer

I.D./O.D.

S.S.

Date Start 11/18/94 End 11/18/94

Hammer Wt.

3" O.D.

Hammer Fall

140 LB.

Location

Other

GS.Elev.

Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	12/12	0-6	15-100	ND *	Very dense, brown, fine to coarse SAND, little fine to coarse Gravel	FILL	1.	NO EQUIPMENT INSTALLED
12										
18										
24		B	12/12	18-24	31-27	ND *	Very dense, brown, fine to coarse SAND, little fine to coarse Gravel			
30										
36										
42		C	24/24	36-42	18-22 13-22	ND	Dense, brown-grey, fine to coarse SAND, some fine to coarse Gravel	42" END OF EXPLORATION		
48										
54										
60										
66										
72										
78										
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

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Boring No. G-4

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. G-5

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Al Augustine

GZA
GeoEnvironmental
Rep. Helena Hollauer

Date Start 11/30/94 End 11/30/94

Location _____

GS.Elev. _____ Datum _____

Casing _____ Sampler _____

Type _____ S.S. _____

I.D./O.D. _____ 3" O.D. _____

Hammer Wt. _____ 140 LB. _____

Hammer Fall _____ 30" _____

Other _____

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	5-20	ND *	Dense, brown, fine to medium SAND, little fine Gravel	FILL	1.	NO EQUIPMENT INSTALLED
12					23-30					
18										
24		B		18-24		ND *	Dense, brown, fine to medium SAND, little fine Gravel			
30										
36										
42		C	18/18	36-42	44-18	ND	Dense, brown, fine to coarse SAND, some fine to coarse Gravel			
48					23					
54										
60										
66										
72										
78										
84										
								42"		
								END OF EXPLORATION		

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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. G-5

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. G-6

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 11/18/94 End 11/18/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type _____

S.S. _____

I.D./O.D. _____

3" O.D. _____

Hammer Wt. _____

140 LB. _____

Hammer Fall _____

30" _____

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	18/18	0-6	24-42	ND *	Very dense, brown, fine to coarse SAND, some fine to coarse Gravel Augered to 18"		1.	NO EQUIPMENT INSTALLED
					100					
12										
18		B	24/24	18-24	23-77	ND *	Very dense, brown, fine to coarse SAND, some fine to coarse Gravel (cobbles)	FILL		
24					63-77					
30										
36		C		24-42		ND	Very dense, brown, fine to coarse SAND, some fine to coarse Gravel (cobbles)	42" END OF EXPLORATION		
42										
48										
54										
60										
66										
72										
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. G-6

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. G-7
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. Helena Hollauer

Date Start 11/18/94 End 11/18/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type S.S.

I.D./O.D. 3" O.D.

Hammer Wt. 140 LB.

Hammer Fall 30"

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	9-10	ND *	Medium dense, brown-orange, fine to coarse SAND and fine to coarse Gravel		1.	----- NO EQUIPMENT INSTALLED
					17-23					
12										
18		B		18-24		ND *	Medium dense, brown-orange, fine to coarse SAND and fine to coarse Gravel	FILL		
24										
30										
36		C	18/18	36-42	48-65	ND	Very dense, brown-grey, fine to coarse SAND and fine to coarse GRAVEL	42" END OF EXPLORATION		
42					57					
48										
54										
60										
66										
72										
78										
84										

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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. G-7

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. G-8

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 11/29/94 End 11/29/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type _____

S.S. _____

I.D./O.D. _____

3" O.D. _____

Hammer Wt. _____

140 LB. _____

Hammer Fall _____

30" _____

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	6-16 14-20	ND *	Medium dense, brown, fine to medium SAND, little Silt, trace fine Gravel, trace Organics		1.	NO EQUIPMENT INSTALLED
12										
18										
24		B		18-24		ND *	Medium dense, brown, fine to medium SAND, trace Silt, trace medium Gravel	FILL		
30										
36										
42		C	18/18	36-42	11-20 41	ND	Dense, brown, fine to medium SAND, little Silt, trace fine Gravel	42" END OF EXPLORATION		
48										
54										
60										
66										
72										
78										
84										

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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. G-8

GZA GEOENVIRONMENTAL, INC.
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ENVIRTE
THOMASTON, CONNECTICUT

Boring No. **G-9**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Casing

Sampler

Groundwater Readings

Foreman **Ron Holman**

Type

S.S.

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

I.D./O.D.

3" O.D.

Date Start **11/29/94** End **11/29/94**

Hammer Wt.

140 LB.

Location

Hammer Fall

30"

Other

GS.Elev. Datum

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information				Field Test Data	Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"					
6		A	24/24	0-6	3-8	ND	Medium dense, brown, fine to medium SAND, trace Organics		1.	----- NO EQUIPMENT INSTALLED
					15-50					
12										
18		B		18-24		ND	Medium dense, brown, fine to medium SAND, trace fine Gravel	FILL		
24										
30										
36		C	18/18	36-42	17-75	ND	Very dense, grey, fine to coarse SAND and fine to medium GRAVEL (cobbles)	42" END OF EXPLORATION		
42					47					
48										
54										
60										
66										
72										
78										
84										

Remarks
1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **G-9**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. P-1 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
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Boring Co. GZA GeoEnvironmental, Inc.			<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>				
Foreman Ron Holman			Type		S.S.		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep. ClareAnn Walsh			I.D./O.D.		3" O.D.						
Date Start 12/1/94 End 12/1/94			Hammer Wt.		140 LB.						
Location			Hammer Fall		30"						
GS.Elev.			Other								
Datum											

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed	
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data					
6		A	24/24	0-6	2-2	0.2 *	Loose, black TOPSOIL, trace Organics	TOPSOIL	1.	NO EQUIPMENT INSTALLED	
					6-7	6"					
12											
18											
24		B		18-24		ND *	Loose, dark-brown, fine to coarse SAND, trace Silt	FILL			
30											
36											
42		C	18/18	36-42	8-8	ND	Medium dense, fine to coarse SAND and fine to medium GRAVEL	42"			
48					5			END OF EXPLORATION			
54											
60											
66											
72											
78											
84											

Remarks
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background values. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **P-1**

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. P-2
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Drilling Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/1/94 End 12/1/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type S.S.
I.D./O.D. 3" O.D.
Hammer Wt. 140 LB.
Hammer Fall 30"
Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	4-7	ND *	Medium dense, brown, fine to medium SAND, trace fine to medium Gravel	FILL	1.	----- NO EQUIPMENT INSTALLED
				7-20						
12										
18										
24		B		18-24		ND *	Medium dense, brown, fine to medium SAND, trace fine to medium Gravel	42"	END OF EXPLORATION	
30										
36										
42		C	18/18	36-42	12-6	ND	Medium dense, brown, fine to medium SAND, trace fine to medium Gravel			
				7						
48										
54										
60										
66										
72										
78										
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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. P-2

GZA GEOENVIRONMENTAL, INC.
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Vernon, Connecticut 06066
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. P-3
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Casing

Sampler

Groundwater Readings

Foreman Ron Holman

Type

S.S.

Date	Time	Depth	Casing	Stab. Time

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

I.D./O.D.

3" O.D.

Hammer Wt.

140 LB.

Date Start 12/1/94 End 12/1/94

Hammer Fall

30"

Location

Other

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	2-7	ND *	Medium dense, dark-brown TOPSOIL, trace fine Gravel	TOPSOIL 6"	1.	NO EQUIPMENT INSTALLED
					13-12					
12							Medium dense, brown, fine to medium SAND, some fine to medium Gravel	FILL		
18		B		18-24		ND *				
24										
30										
36		C	18/18	36-42	24-14	ND	Medium dense, grey-brown, fine to coarse GRAVEL, some fine to coarse Sand	42"		
					12					
42								END OF EXPLORATION		
48										
54										
60										
66										
72										
78										
84										

R
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. P-3

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. P-4 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
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Boring Co. GZA GeoEnvironmental, Inc.			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>				
Foreman	Ron Holman		Type	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	ClareAnn Walsh		I.D./O.D.	3" O.D.					
Date Start	12/1/94	End	12/1/94	Hammer Wt.	140 LB.				
Location			Hammer Fall	30"					
GS.Elev.	Datum		Other						

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	3-16	ND *	Dense, black TOPSOIL, trace Organics	TOPSOIL	1.	NO EQUIPMENT INSTALLED
					25-22			6"		
12										
18										
24										
30										
36										
42										
48										
54										
60		B		18-24		ND *	Dense, brown, fine SAND, trace fine Gravel	FILL		
66										
72										
78										
84										
		C	18/18	36-42	21-51	ND	Very dense, dark-brown SILT, trace fine to coarse SAND	42"		
					72			END OF EXPLORATION		

Remarks
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **P-4**

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. P-5
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/1/94 End 12/1/94

Location _____

GS.Elev. _____ Datum _____

	Casing	Sampler
Type	_____	S.S.
I.D./O.D.	_____	3" O.D.
Hammer Wt.	_____	140 LB.
Hammer Fall	_____	30"
Other	_____	

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	7-7	ND *	Medium dense, dark-brown TOPSOIL, trace Organics	TOPSOIL 6"	1.	NO EQUIPMENT INSTALLED
12					12-14					
18										
24		B		18-24		ND *	Medium dense, dark brown, fine SAND, trace fine to medium Gravel	FILL		
30										
36										
42		C	18/18	36-42	32-69	ND	Very dense, dark brown-grey, fine to coarse Gravel, little fine to medium Sand	42"		
48					81					
54										
60								END OF EXPLORATION		
66										
72										
78										
84										

R
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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. P-5

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. P-6

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/2/94 End 12/2/94

Location

GS.Elev. Datum

Type HSA S.S.

I.D./O.D. 4-1/4" 3" O.D.

Hammer Wt. 140 LB.

Hammer Fall 30"

Other

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	8-12	ND *	Medium dense, brown, fine SAND, some Silt, trace medium Gravel		1.	NO EQUIPMENT INSTALLED
					16-25					
12										
18		B		18-24		ND *	Medium dense, brown, fine SAND, some Silt, trace medium Gravel	FILL		
24										
30										
36		C	18/18	36-42	25-22	ND	Very dense, brown, fine SAND, some Silt, trace medium Gravel			
42					25					
48										
54								52" END OF EXPLORATION	2.	
60										
66										
72										
78										
84										

Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.
2. Auger refusal at 52" depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. P-6

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **P-7**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

Date Start **12/2/94** End **12/2/94**

Location _____

GS.Elev. _____ Datum _____

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	3-9	ND *	Medium dense, fine SAND and SILT, little Organics, trace fine Gravel		1.	NO EQUIPMENT INSTALLED
12					10-20					
18										
24		B		18-24		ND *	Medium dense, brown, fine SAND, some Silt, trace fine Gravel	FILL		
30										
36										
42		C	18/18	36-42	24-30	ND	Very dense, brown, fine SAND			
48					100					
54										
60								60"	2.	
66								END OF EXPLORATION		
72										
78										
84										

Remarks

- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.
- Auger refusal at 60" depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **P-7**

GZA GEOENVIRONMENTAL, INC.
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(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **P-8**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

Date Start **12/2/94** End **12/2/94**

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type **S.S.**

I.D./O.D. **3" O.D.**

Hammer Wt. **140 LB.**

Hammer Fall **30"**

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	33-23	ND *	Very dense, brown, fine to medium SAND, little Silt, little fine to medium Gravel		1.	NO EQUIPMENT INSTALLED
					30-17					
12										
18		B		18-24		ND *	Very dense, brown, fine to medium SAND, little Silt, little fine to medium Gravel	FILL		
24										
30										
36		C	18/18	36-42	13-12	ND	Dense, brown, fine to medium SAND and processed STONE	42" END OF EXPLORATION		
42					18					
48										
54										
60										
66										
72										
78										
84										

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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **P-8**

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **P-9**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

Date Start **12/2/94** End **12/2/94**

Location _____

GS.Elev. _____ Datum _____

Type _____

I.D./O.D. _____

Hammer Wt. _____

Hammer Fall _____

Other _____

Casing

Sampler

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches) 6'	Blows/	Field Test Data				
6		A	24/24	0-6	8-13	ND *	Dense, brown, fine SAND, little medium Gravel, trace Organics	FILL	1.	NO EQUIPMENT INSTALLED
					29-17					
12										
18		B		18-24		ND *	Dense, brown, fine to medium SAND, some Gravel			
24										
30										
36		C	18/18	36-42	22-32	ND	Very dense, brown, fine SAND	42"		
42					35			END OF EXPLORATION		
48										
54										
60										
66										
72										
78										
84										

Remarks:

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **P-9**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>P-10</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>				
Boring Co. <u>GZA GeoEnvironmental, Inc.</u>					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>					
Foreman <u>Ron Holman</u>					Type <u> </u>		S.S. <u> </u>		<u>Date</u>	<u>Time</u>	<u>Depth</u>	<u>Casing</u>	<u>Stab. Time</u>	
GZA GeoEnvironmental Rep. <u>ClareAnn Walsh</u>					I.D./O.D. <u> </u>		3" O.D. <u> </u>							
Date Start <u>12/2/94</u> End <u>12/2/94</u>					Hammer Wt. <u> </u>		140 LB. <u> </u>							
Location <u> </u>					Hammer Fall <u> </u>		30" <u> </u>							
GS.Elev. <u> </u> Datum <u> </u>					Other <u> </u>									

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
		A	12/12	0-6	9-100/0"	ND *	Very dense, brown, fine SAND, trace medium Gravel	FILL	1.	NO EQUIPMENT INSTALLED
6								6"	2.	
								END OF EXPLORATION		
12										
18										
24										
30										
36										
42										
48										
54										
60										
66										
72										
78										
84										

Remarks
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.
 2. Unable to advance spoon past 6 inch depth.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. P-10

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u> R-1 </u> Page <u> 1 </u> of <u> 1 </u> File No. <u> 41302.3 </u> Chkd. By: <u> JMB </u>				
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Boring Co. <u>GZA GeoEnvironmental, Inc.</u>			<u>Casing</u>	<u>Sampler</u>	Groundwater Readings				
Foreman	<u>Ron Holman</u>	Type	<u>S.S.</u>						
GZA GeoEnvironmental		I.D./O.D.	<u>3" O.D.</u>						
Rep. <u>ClareAnn Walsh</u>		Hammer Wt.	<u>140 LB.</u>						
Date Start <u>11/30/94</u>	End <u>11/30/94</u>	Hammer Fall	<u>30"</u>						
Location		Other							
GS.Elev.		Datum							

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
		A	24/24	0-6	2-4	0.2 *	Medium dense, dark-brown TOPSOIL	TOPSOIL	1.	NO EQUIPMENT INSTALLED
6					12-11			6"	2.	
12										
18		B		18-24		0.2 *	FILL			
24										
30										
36										
42		C	18/18	36-42	19-36	ND		42"		
48					30		END OF EXPLORATION			
54										
60										
66										
72										
78										
84										

Remarks
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.
 2. PID readings may be false due to vapors from Envirite Building.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

	Boring No. <u> R-1 </u>
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GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

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Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. R-2

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

Type

Casing

Sampler

Groundwater Readings

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

I.D./O.D.

S.S.

Date	Time	Depth	Casing	Stab. Time

Date Start 11/30/94 End 11/30/94

Hammer Wt.

140 LB.

Location

Other

30"

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	7-14 37-44	0.3 *	Very dense, brown, fine SAND, little fine Gravel		1.	NO EQUIPMENT INSTALLED
12									2.	
18		B		18-24		ND *	Very dense, grey-black, fine to coarse SAND and fine to coarse GRAVEL (cobbles)	FILL		
24										
30								36"		
36		C	0/0	36	—					
42							No sample; spoon refusal	END OF EXPLORATION		
48										
54										
60										
66										
72										
78										
84										

Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.
2. Elevated background readings due to vapors from Envirite building.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-2

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRTE THOMASTON, CONNECTICUT					Boring No. <u> R-3 </u> Page <u> 1 </u> of <u> 1 </u> File No. <u> 41302.3 </u> Chkd. By: <u> JMB </u>				
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Boring Co. <u>GZA GeoEnvironmental, Inc.</u>			<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>				
Foreman	<u>Ron Holman</u>		Type	<u>S.S.</u>	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	<u>Helena Hollauer</u>		I.D./O.D.	<u>3" O.D.</u>					
Date Start	<u>11/17/94</u>	End	<u>11/17/94</u>	Hammer Wt.	<u>140 LB.</u>				
Location			Hammer Fall	<u>30"</u>					
GS.Elev.	<u> </u>		Other						
	<u> </u>								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
		A	24/24	0-6	5-11	ND *	Medium dense, brown, fine to medium SAND, little fine to coarse Gravel	FILL	1.	NO EQUIPMENT INSTALLED
6					9-8					
12										
18										
		B		18-24		ND *	Medium dense, brown, fine to medium SAND, little fine to coarse Gravel			
24										
30										
36										
		C	18/18	36-42	18-22	ND	Dense, brown, fine to coarse SAND, some fine to coarse Gravel	42" END OF EXPLORATION		
42					30					
48										
54										
60										
66										
72										
78										
84										

Remarks
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-3

GZA GEOENVIRONMENTAL, INC.
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(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. R-4
Page 1 of 1
File No. 41302.3
Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Casing

Sampler

Groundwater Readings

Foreman Al Augustine

Type

S.S.

Date	Time	Depth	Casing	Stab. Time

GZA
GeoEnvironmental
Rep. Helena Hollauer

I.D./O.D.

3" O.D.

Hammer Wt.

140 LB.

Date Start 11/17/94 End 11/17/94

Hammer Fall

30"

Location

Other

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	4-14	ND *	Medium dense, brown-grey, fine to coarse SAND, some fine to coarse Gravel (cobbles)	FILL	1.	----- NO EQUIPMENT INSTALLED
12					24-24					
18										
24		B		18-24		ND *	Medium dense, brown-grey, fine to coarse SAND, some fine to coarse Gravel (cobbles)			
30										
36										
42		C	18/18	36-42	29-33	ND	Very dense, grey, fine to coarse SAND and fine to coarse GRAVEL (cobbles)	42" END OF EXPLORATION		
48					25					
54										
60										
66										
72										
78										
84										

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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "***" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-4

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **R-5**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Al Augustine**

GZA
GeoEnvironmental
Rep. **Helena Hollauer**

Date Start **11/18/94** End **11/18/94**

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type **S.S.**

I.D./O.D. **3" O.D.**

Hammer Wt. **140 LB.**

Hammer Fall **30"**

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	5-5	ND *	Medium dense, brown, fine to medium SAND, little Silt, trace fine to coarse Gravel, trace Organics (roots)	FILL	1.	NO EQUIPMENT INSTALLED
12					5-7					
18										
24		B		18-24		ND *	Medium dense, brown, fine to coarse SAND, little Silt, trace fine to coarse Gravel, trace Organics (roots)			
30										
36										
42		C	18/18	36-42	10-12	ND	Medium dense, brown, fine to medium SAND, little Silt, trace Organics (roots)	42" END OF EXPLORATION		
48					10					
54										
60										
66										
72										
78										
84										

R e m a r k s	<p>1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.</p>
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **R-5**

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. R-6

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Al Augustine

GZA
GeoEnvironmental
Rep. Helena Hollauer

Date Start 11/18/94 End 11/18/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type S.S.
I.D./O.D. 3" O.D.
Hammer Wt. 140 LB.
Hammer Fall 30"
Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	6-10	3.9 *	Dense, brown, fine to coarse SAND, little fine to coarse Gravel, trace Organics (roots)	FILL	1.	NO EQUIPMENT INSTALLED
12					27-38					
18										
24		B		18-24		3.0 *	Dense, brown, fine to coarse SAND, little fine to coarse Gravel, trace Organics (roots)			
30										
36										
42		C	18/18	36-42	26-21	ND	Dense, grey-brown, fine to coarse SAND, some fine to coarse Gravel (cobbles)	42" END OF EXPLORATION		
48					17					
54										
60										
66										
72										
78										
84										

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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-6

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Vernon, Connecticut 06066
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **R-7**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

Date Start **11/23/94** End **11/23/94**

Location

GS.Elev. Datum

Casing

Sampler

Groundwater Readings

Type

S.S.

I.D./O.D.

3" O.D.

Hammer Wt.

140 LB.

Hammer Fall

30"

Other

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	5-6	0.1 *	Medium dense, dark-brown TOPSOIL	TOPSOIL 6"	1.	NO EQUIPMENT INSTALLED
					7-5					
12										
18										
24		B		18-24		ND *	Medium dense, brown, fine to medium SAND	FILL		
30										
36										
42		C	18/18	36-42	6-8	0.1	Medium dense, brown, fine SAND, trace medium Gravel (processed stone)	42"		
48					8			END OF EXPLORATION		
54										
60										
66										
72										
78										
84										

R
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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **R-7**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRTE THOMASTON, CONNECTICUT					Boring No. R-8 Page 1 of 1 File No. 41302.3 Chkd. By: JMB				
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Boring Co. GZA GeoEnvironmental, Inc.			<u>Casing</u>	<u>Sampler</u>	Groundwater Readings				
Foreman	Ron Holman		Type	S.S.	Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep.	ClareAnn Walsh		I.D./O.D.	3" O.D.					
			Hammer Wt.	140 LB.					
Date Start	11/23/94	End	11/23/94	Hammer Fall	30"				
Location			Other						
GS.Elev.	Datum								

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	8-7	ND *	Medium dense, dark-brown TOPSOIL, trace Processed Stone	TOPSOIL	1.	NO EQUIPMENT INSTALLED
					8-9	6"				
12										
18		B		18-24		ND *	Medium dense, brown, fine SAND	FILL		
24										
30										
36		C	18/18	36-42	29-20	ND	Dense, brown, fine SAND, little Processed Stone	42"		
42					18					
48										
54								END OF EXPLORATION		
60										
66										
72										
78										
84										

R e m a r k s
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **R-8**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. R-9 Page 1 of 1 File No. 41302.3 Chkd. By: JMB																												
Boring Co. GZA GeoEnvironmental, Inc.					<u>Casing</u>		<u>Sampler</u>		<u>Groundwater Readings</u>																													
Foreman Ron Holman					Type		S.S.		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Time</th> <th>Depth</th> <th>Casing</th> <th>Stab. Time</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>					Date	Time	Depth	Casing	Stab. Time																				
Date	Time	Depth	Casing	Stab. Time																																		
GZA GeoEnvironmental Rep. ClareAnn Walsh					I.D./O.D.		3" O.D.																															
Date Start 11/29/94 End 11/29/94					Hammer Wt.		140 LB.																															
Location					Hammer Fall		30"																															
GS.Elev.					Other																																	
Datum																																						

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	5-7	ND *	Medium dense, brown, fine to medium SAND, trace fine Gravel	FILL	1.	NO EQUIPMENT INSTALLED
					9-10					
12										
18										
24		B		18-24		ND *	Medium dense, brown, fine to medium SAND, trace fine Gravel			
30										
36		C	18/18	36-42	7-8	ND	Medium dense, brown, fine to medium SAND, trace fine Gravel	42"		
					9					
42							END OF EXPLORATION			
48										
54										
60										
66										
72										
78										
84										

Remarks
 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "***" indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-9

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. R-10

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 11/29/94 End 11/29/94

Location _____

GS.Elev. _____ Datum _____

Casing _____

Sampler _____

Type _____

S.S. _____

I.D./O.D. _____

3" O.D. _____

Hammer Wt. _____

140 LB. _____

Hammer Fall _____

30" _____

Other _____

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	4-10	ND *	Medium dense, brown, fine to medium SAND, trace Organics	FILL	1.	NO EQUIPMENT INSTALLED
					12-14					
12										
18		B		18-24		ND *	Medium dense, brown, fine to medium SAND, trace Organics			
24										
30										
36										
42		C	18/18	36-42	14-18	ND	Very dense, brown, fine to medium SAND, trace Organics	42"		
48					30			END OF EXPLORATION		
54										
60										
66										
72										
78										
84										

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- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-10

GZA GEOENVIRONMENTAL, INC.
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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. R-11

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 12/7/94 End 12/7/94

Location

GS.Elev. Datum

	Casing	Sampler
Type	HSA	S.S.
I.D./O.D.	4-1/4"	3" O.D.
Hammer Wt.		140 LB.
Hammer Fall		30"
Other		

Groundwater Readings

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	4-14 30-18	ND *	Dense, dark-brown TOPSOIL, trace Organics	TOPSOIL 6"	1.	NO EQUIPMENT INSTALLED
12										
18		B		18-24		ND *	Dense, brown, fine SAND, some fine to coarse Gravel			
24										
30										
36		C	24/24	36-42	25-49 48-39	ND *	Very dense, brown, fine to medium SAND and fine to coarse GRAVEL	FILL		
42										
48										
54										
60		D	24/0	60-84	11-10 11-12		No recovery; pushing cobble; drilled to 84" depth			
66										
72										
78										
84		E	24/0	84-108	5-6 3-7		No recovery	108" END OF EXPLORATION		

Remarks

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis. ND indicates None Detected.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-11

GZA GEOENVIRONMENTAL, INC.
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 (203) 875-7655

ENVIRITE
 THOMASTON, CONNECTICUT

Boring No. **R-12**
 Page **1** of **1**
 File No. **41302.3**
 Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Foreman **Ron Holman**

GZA
 GeoEnvironmental
 Rep. **ClareAnn Walsh**

Date Start **12/8/94** End **12/8/94**

Location _____

GS.Elev. _____ Datum _____

Casing **HSA** Sampler **S.S.**
 I.D./O.D. **4-1/4"** **3" O.D.**
 Hammer Wt. **140 LB.**
 Hammer Fall **30"**
 Other _____

Groundwater Readings				
Date	Time	Depth	Casing	Stab. Time
12/8/94	1420	14.6'	15.0'	0 hours

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (feet)	Blows/ 6"	Field Test Data				
5		A	24/24	0-0.5	4-6	10 *	Top 2": Dark brown TOPSOIL Bottom 4": Brown, fine SAND, some Organics	FILL	1.	NO EQUIPMENT INSTALLED
					11-15				2.	
		B		1.5-2.0		ND	Medium dense, brown, fine SAND, trace Silt			
		C	18-18	3.0-3.5	28-82	ND *	Very dense, brown, fine to coarse SAND, fine to coarse Gravel in the tip of spoon (cobbles)			
					88		No recovery			
10		D	24/0	5-7	24-24	0.5		11.0'		
					22-14					
		E	24/6	7-9	14-14	2	Medium dense, brown, fine SAND, little Silt			
					8-6					
		F	24/8	9-11	2-3	86 *	Loose, grey, fine to coarse SAND, little Silt			
15					5-5			SAND AND SILT (RUBBER WASTE) 13.0'	3.	
		G	24/20	11-13	7-5	677	Medium dense, grey-dark brown, fine SAND and SILT, some pink and red Rubber			
					8-8					
		H	24/18	13-15	11-11	455 *	Medium dense, black, fine to coarse SAND and fine GRAVEL			
					14-22					
20		I	24/12	15-17	26-26	307	Dense, dark grey, fine to coarse SAND and fine to medium GRAVEL	SAND AND GRAVEL 19.0'		
					12-18					
		J	24/14	17-19	16-19	329	Dense, dark grey, fine to coarse SAND and fine to coarse GRAVEL			
					17-14					
25								END OF EXPLORATION		

Remarks

- Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
- PID readings obtained indoors.
- Waste material at approximately 11 to 13 feet below grade.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **R-12**

GZA GEOENVIRONMENTAL, INC.
Consulting Engineers/Geologists/Environmental Scientists

27 Naek Road
Vernon, Connecticut 06066
(203) 875-7655

ENVIRITE
THOMASTON, CONNECTICUT

Boring No. **R-13**

Page **1** of **1**

File No. **41302.3**

Chkd. By: **JMB**

Boring Co. **GZA GeoEnvironmental, Inc.**

Casing

Sampler

Groundwater Readings

Foreman **Ron Holman**

Type

HAND AUGER

GZA
GeoEnvironmental
Rep. **ClareAnn Walsh**

I.D./O.D.

Hammer Wt.

Date Start **11/29/94** End **11/29/94**

Hammer Fall

Location

Other

Date	Time	Depth	Casing	Stab. Time

GS.Elev. Datum

D P T H	C B S L N W G S	Sample Information				Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data			
6		A		0-6		ND *	Brown, fine to medium SAND	1.	NO EQUIPMENT INSTALLED
12									
18									
24									
30									
36									
42									
48									
54									
60									
66									2. 24" END OF EXPLORATION
72									
78									
84									

R
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s

1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
ND indicates None Detected.
2. Unable to collect deeper sample due to overhead lines.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. **R-13**

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Naek Road Vernon, Connecticut 06066 (203) 875-7655				ENVIRTE THOMASTON, CONNECTICUT				Boring No. <u>R-14</u> Page <u>1</u> of <u>1</u> File No. <u>41302.3</u> Chkd. By: <u>JMB</u>																						
Boring Co. <u>GZA GeoEnvironmental, Inc.</u>				<u>Casing</u>	<u>Sampler</u>	<u>Groundwater Readings</u>																								
Foreman <u>Ron Holman</u> GZA GeoEnvironmental Rep. <u>ClareAnn Walsh</u> Date Start <u>11/29/94</u> End <u>11/29/94</u> Location _____ GS.Elev. _____ Datum _____	Type <u>I.D./O.D.</u> <u>Hammer Wt.</u> <u>Hammer Fall</u> <u>Other</u>		<u>HAND AUGER</u> 		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Time</th> <th>Depth</th> <th>Casing</th> <th>Stab. Time</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	Date	Time	Depth	Casing	Stab. Time																				
Date	Time	Depth	Casing	Stab. Time																										
D P T H	C B S L N W G S	Sample Information				Sample Description & Classification	Stratum Description	R M K S	Equipment Installed																					
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data																								
6		A	24/24	0-6	—	ND *	Brown, fine to medium SAND	SAND	1.	NO EQUIPMENT INSTALLED																				
12																														
18																														
24																														
30							Light-brown, fine to medium SAND, some fine Gravel	24" END OF EXPLORATION	2.																					
36																														
42																														
48																														
54																														
60																														
66																														
72																														
78																														
84																														
<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Remarks</div> <div> 1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected. 2. Unable to access with drilling rig due to slope and trees. </div> </div>																														
Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.																														
										Boring No. R-14																				

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 27 Naek Road
 Vernon, Connecticut 06066
 (203) 875-7655

ENVIRITE
 THOMASTON, CONNECTICUT

Boring No. R-15
 Page 1 of 1
 File No. 41302.3
 Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
 GeoEnvironmental
 Rep. ClareAnn Walsh

Date Start 11/29/94 End 11/29/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type _____ Hand Auger

I.D./O.D. _____

Hammer Wt. _____

Hammer Fall _____

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
		A	24/24	0-6	——	ND *	Brown, fine to medium SAND, trace fine Gravel	SAND	1.	----- NO EQUIPMENT INSTALLED
6										
12										
18										
24		B		18-24	——	ND *				
30										
36							Brown, fine to medium SAND, trace fine Gravel	24"	2.	
42								END OF EXPLORATION		
48										
54										
60										
66										
72										
78										
84										

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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. *** indicates sample sent to laboratory for analysis.
 ND indicates None Detected.
2. Unable to collect deeper sample due to overhead lines.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-15

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. R-16

Page 1 of 1

File No. 41302.3

Chkd. By: JMB

Boring Co. GZA GeoEnvironmental, Inc.

Foreman Ron Holman

GZA
GeoEnvironmental
Rep. ClareAnn Walsh

Date Start 11/29/94 End 11/29/94

Location _____

GS.Elev. _____ Datum _____

Casing

Sampler

Groundwater Readings

Type _____

HAND AUGER

I.D./O.D. _____

Hammer Wt. _____

Hammer Fall _____

Other _____

Date	Time	Depth	Casing	Stab. Time

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (inches)	Blows/ 6"	Field Test Data				
6		A	24/24	0-6	—	ND *	Brown, fine to medium SAND, little Silt, trace fine Gravel	SAND	1.	NO EQUIPMENT INSTALLED
12										
18		B		18-24	—	ND *	Brown, fine to medium SAND, little Silt, trace fine Gravel	24" END OF EXPLORATION		
24										
30										
36										
42										
48										
54										
60										
66										
72										
78										
84										

R
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1. Soil samples field screened for volatile organic compounds with a 10.0 eV portable Thermo Environmental Instruments Model 580B photoionization detector (PID). PID values represent meter response in parts per million (ppm) above background. "*" indicates sample sent to laboratory for analysis. ND indicates None Detected.
2. Unable to collect deeper sample due to overhead lines.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. R-16

[illegible]

[illegible]

[illegible]

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ENVIRITE
THOMASTON, CONNECTICUT

Boring No. B-5

Page 1 of 1

File No. 41302.7

Chkd. By:

Boring Co. NA

Casing

Sampler

Groundwater Readings

Foreman

Type

Date

Time

Depth

Casing

Stab. Time

GZA

GeoEnvironmental

Rep.

Helena Hollauer

I.D./O.D.

Hammer Wt.

Date Start 11/29/94

End 11/29/94

Hammer Fall

Location

Other

GS.Elev.

Datum

D P T H	C B S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
						ND	Brown, fine to coarse SAND, some Silt, some coarse Gravel		1.	NO EQUIPMENT INSTALLED
5										
10										
15										
20										
25										

Remarks

1. Soil samples collected 3" to 9" below grade using a hand auger.

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No. B-5

GZA GEOENVIRONMENTAL, INC. Consulting Engineers/Geologists/Environmental Scientists 27 Nack Road Vernon, Connecticut 06066 (203) 875-7655					ENVIRITE THOMASTON, CONNECTICUT					Boring No. <u>B-7</u> Page <u>1</u> of <u>1</u> File No. <u>41302.7</u> Chkd. By: _____				
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Boring Co. <u>NA</u>		<u>Casing</u>		<u>Sampler</u>		Groundwater Readings				
Foreman _____		Type _____		_____		Date	Time	Depth	Casing	Stab. Time
GZA GeoEnvironmental Rep. <u>Helena Hollauer</u>		I.D./O.D. _____		_____						
Date Start <u>11/29/94</u> End <u>11/29/94</u>		Hammer Wt. _____		_____						
Location _____		Hammer Fall _____		_____						
GS.Elev. _____ Datum _____		Other _____		_____						

D P T H	C S L N W G S	Sample Information					Sample Description & Classification	Stratum Description	R M K S	Equipment Installed
		No.	Pen./ Rec.	Depth (Ft.)	Blows/ 6"	Field Test Data				
						ND	Brown, fine to coarse SAND, some Silt, some coarse Gravel		1. 2.	NO EQUIPMENT INSTALLED
<div style="display: flex; justify-content: space-between;"> 5 10 15 20 25 </div>										

R e m a r k s	1. Soil samples collected 3" to 9" below grade using a hand auger. 2. Duplicate sample collected BX01.
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Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.		Boring No. <u>B-7</u>
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